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## ANALYSIS OF SIX ANNUAL SEASONS OF FALL HAY FEVER IN NEW ORLEANS, LA.

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A careful study of the fall hay-fever seasons from 1916 to 1922, inclusive, based on clinical, pollenometric, and meteorologic data, gives interesting information on the character and course of hay fever. The fall hay fever has been selected for this analysis, as the principal cause of this form of the disease in Louisiana, in which State these records were taken, is the common ragweed pollen, the buoyancy of which, on account of its small size (20 microns) and spiculated surface, is so great that its number is fairly uniform within the radius of its potential area. By allowing for the difference in its season of bloom, and for weather conditions, the results may be considered representative of the States east of Kansas generally. By substituting the wormwood (*Artemisia*) for the ragweeds, the statement applies for the Pacific and Rocky Mountain States.<sup>1</sup>

The spring and summer hay fever is due to numerous other pollens, generated by grasses, plants, and trees, individually less common than the ragweeds and most of the pollens of which are also less buoyant than the pollen of these weeds. On this account, an analysis of the spring and summer hay fever is omitted in this report, as being more of local than of general interest.

Complete records are kept at our laboratories of the clinical reports and of the pollen and weather reports, tables of the latter for the months of September and October, 1916 and 1918, and of August, September, and October, 1922, being shown on the following pages. In addition to the individual records, which are made at the Hay-fever and Asthma Clinic, a condensed clinical record is kept showing the dates of acute attacks of the patients, with a view of checking these against variations of the pollenometric reports and weather conditions.

<sup>1</sup> Hay-Fever: Its Cause and Prevention in the Rocky Mountain and Pacific States. By Wm. Scheppegrell. Public Health Reports, July 20, 1917. Reprint No. 412.

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## Pollenometric and meteorologic data, New Orleans, La.

1916.

|               | Grass<br>pollens. | Am-<br>brosia<br>pollens. | Other<br>pollens. | Esti-<br>mated<br>num-<br>ber of<br>pollens<br>per<br>cubic<br>yard<br>of air. | Maxi-<br>mum<br>wind<br>ve-<br>locity. | Mean<br>wind<br>ve-<br>locity. | Direction of wind. | Mean<br>tem-<br>pera-<br>ture. | Rain-<br>fall. |
|---------------|-------------------|---------------------------|-------------------|--|--|--------------------------------|--------------------|--------------------------------|----------------|
| Sept. 22..... | 4                 | 5                         | 2                 | 29   | 10                                     | 3.8                            | NW.....            | 78                             | 0              |
| 23.....       |                   | 7                         |                   | 22   | 11                                     | 5.4                            | S.....             | 80                             | 0              |
| 26.....       | 1                 | 9                         |                   | 31   | 16                                     | 6.0                            | SE.....            | 80                             | .01            |
| 28.....       |                   | 15                        |                   | 45   | 15                                     | 4.3                            | S.....             | 82                             | .02            |
| 29.....       |                   | 114                       |                   | 365  | 22                                     | 13.4                           | NE.....            | 68                             | 0              |
| Oct. 1.....   |                   | 36                        |                   | 115  | 16                                     | 7.5                            | NE.....            | 68                             | 0              |
| 2.....        |                   | 10                        |                   | 61   | 14                                     | 7.4                            | SE.....            | 71                             | 0              |
| 3.....        |                   | 6                         |                   | 19   | 12                                     | 5.9                            | E.....             | 72                             | 0              |
| 4.....        |                   | 7                         |                   | 22   | 12                                     | 6.2                            | NE.....            | 74                             | 0              |
| 5.....        |                   | 11                        |                   | 35   | 21                                     | 10.7                           | NE.....            | 73                             | .01            |
| 6.....        | 2                 | 6                         | 2                 | 29   | 16                                     | 7.2                            | NE.....            | 78                             | .01            |
| 7.....        | 1                 | 7                         |                   | 26   | 17                                     | 7.9                            | E.....             | 76                             | .02            |
| 8.....        |                   | 2                         |                   | 6  | 12                                     | 4.3                            | NE.....            | 80                             | 1.85           |
| 9.....        |                   | 8                         |                   | 25   | 7                                      | 2.9                            | SE.....            | 80                             | 0              |
| 10.....       |                   | 12                        | 1                 | 42   | 18                                     | 9.6                            | NW.....            | 74                             | 0              |
| 11.....       |                   | 11                        |                   | 35   | 18                                     | 7.7                            | NE.....            | 73                             | 0              |
| 12.....       |                   | 3                         | 1                 | 13   | 7                                      | 4.3                            | E.....             | 77                             | 0              |
| 13.....       |                   |                           |                   |  |  |                                | SE.....            |                                |                |
| 14.....       |                   | 9                         | 2                 | 35   | 10                                     | 5.0                            | SE.....            | 78                             | 0              |
| 17.....       |                   |                           |                   | 0  | 25                                     | 14.0                           | S.....             | 72                             | 2.58           |
| 18.....       |                   | 1                         | 4                 | 16   | 24                                     | 11.5                           | NE.....            | 74                             | .19            |
| 19.....       |                   | 23                        | 5                 | 90   | 15                                     | 7.9                            | SW.....            | 76                             | 0              |
| 20.....       |                   | 5                         | 5                 | 32   | 23                                     | 13.4                           | NE.....            | 62                             | 0              |
| 21.....       |                   | 12                        | 2                 | 45   | 15                                     | 8.5                            | NW.....            | 58                             | 0              |
| 24.....       |                   |                           | 2                 | 6  | 8                                      | 4.2                            | E.....             | 67                             | 0              |
| 25.....       |                   | 1                         | 1                 | 6  | 15                                     | 7.1                            | NW.....            | 70                             | 0              |
| 26.....       |                   | 8                         | 2                 | 32   | 17                                     | 10.1                           | NE.....            | 62                             | 0              |
| 27.....       |                   | 1                         | 3                 | 13   | 15                                     | 8.5                            | NE.....            | 66                             | 0              |
| 28.....       |                   | 1                         | 8                 | 29   | 12                                     | 6.5                            | NE.....            | 67                             | 0              |
| 29.....       |                   |                           | 1                 | 3  | 9                                      | 4.5                            | E.....             | 70                             | 0              |
| 31.....       |                   |                           | 2                 | 6  | 8                                      | 3.7                            | NW.....            | 72                             | 0              |

## SEPTEMBER, 1918.

|              |   |    |   |    |    |     |         |    |      |
|--------------|---|----|---|----|----|-----|---------|----|------|
| Sept. 1..... | 1 | 5  | 4 | 31 | 11 | 4.5 | NE..... | 84 | 0    |
| 2.....       |   | 7  | 3 | 31 | 12 | 3.7 | NW..... | 84 | .45  |
| 3.....       | 1 | 14 | 1 | 50 | 18 | 3.4 | SW..... | 82 | .33  |
| 4.....       | 3 | 9  |   | 37 | 13 | 4.3 | E.....  | 85 | 0    |
| 5.....       |   | 10 | 3 | 40 | 15 | 5.2 | SW..... | 82 | 0    |
| 6.....       | 5 | 12 | 1 | 56 | 10 | 6.4 | NE..... | 74 | 2.38 |
| 7.....       |   | 3  |   | 9  | 14 | 8.5 | NW..... | 75 | 0    |
| 8.....       |   | 6  |   | 19 | 12 | 7.2 | N.....  | 75 | 0    |
| 9.....       |   | 9  | 2 | 34 | 14 | 6.2 | NE..... | 78 | 0    |
| 10.....      | 3 | 12 | 2 | 53 | 15 | 7.7 | NW..... | 76 | 0    |
| 11.....      |   | 4  |   | 12 | 11 | 5.4 | E.....  | 80 | 0    |

SEPTEMBER, 1918—Continued.

|               | Grass<br>pollens. | Am-<br>brosia<br>pollens. | Other<br>pollens. | Esti-<br>mated<br>num-<br>ber of<br>pollens<br>per<br>cubic<br>yard of<br>air. | Maxi-<br>mum<br>wind<br>ve-<br>locity. | Mean<br>wind<br>ve-<br>locity. | Direction of wind. | Mean<br>tem-<br>pera-<br>ture. | Rain-<br>fall. |
|---------------|-------------------|---------------------------|-------------------|--|--|--------------------------------|--------------------|--------------------------------|----------------|
| Sept. 12..... |                   | 5                         |                   | 15   | 12                                     | 4.1                            | NW.....            | 80                             | 0              |
| 13.....       |                   | 6                         |                   | 19   | 10                                     | 4.2                            | SE.....            | 81                             | 0              |
| 14.....       |                   | 12                        | 3                 | 46   | 9                                      | 4.5                            | S.....             | 80                             | 0              |
| 15.....       | 2                 | 16                        | 4                 | 68   | 11                                     | 3.9                            | N.....             | 82                             | 0              |
| 16.....       |                   | 2                         |                   | 6  | 8                                      | 4.5                            | SE.....            | 81                             | 0              |
| 17.....       |                   | 2                         |                   | 6  | 9                                      | 4.1                            | NW.....            | 82                             | 0              |
| 18.....       |                   | 14                        | 3                 | 53   | 11                                     | 4.2                            | SE.....            | 82                             | 0              |
| 19.....       |                   | 5                         |                   | 16   | 14                                     | 5.6                            | NW.....            | 82                             | 0              |
| 20.....       |                   | 0                         |                   | 0  | 22                                     | 10.3                           | NE.....            | 67                             | 1.65           |
| 21.....       | 3                 | 110                       | 5                 | 357  | 19                                     | 10.7                           | NE.....            | 64                             | 0              |
| 22.....       | 1                 | 25                        |                   | 81   | 17                                     | 8.5                            | NE.....            | 66                             | 0              |
| 23.....       | 2                 | 40                        | 2                 | 136  | 21                                     | 9.9                            | SE.....            | 69                             | 0              |
| 24.....       | 1                 | 23                        |                   | 74   | 17                                     | 9.9                            | E.....             | 74                             | 0              |
| 25.....       |                   | 15                        |                   | 47   | 14                                     | 5.5                            | SE.....            | 77                             | .01            |
| 26.....       | 1                 | 16                        |                   | 53   | 9                                      | 4.1                            | SE.....            | 77                             | 0              |
| 27.....       |                   | 24                        | 1                 | 78   | 16                                     | 8.8                            | NW.....            | 74                             | 0              |
| 28.....       |                   | 26                        |                   | 81   | 16                                     | 10.2                           | NW.....            | 67                             | 0              |
| 29.....       |                   | 27                        | 2                 | 90   | 12                                     | 6.3                            | NW.....            | 70                             | 0              |
| 30.....       |                   | 24                        |                   | 73   | 10                                     | 5.7                            | NE.....            | 76                             | 0              |

|             |   |    |   |    |    |      |         |    |      |
|-------------|---|----|---|----|----|------|---------|----|------|
| Oct. 1..... | 2 | 32 | 4 | 88 | 13 | 6.3  | NE..... | 78 | 0    |
| 2.....      | 1 | 10 | 1 | 37 | 14 | 6.7  | E.....  | 78 | 0    |
| 3.....      | 2 | 13 | 2 | 59 | 15 | 7.0  | NE..... | 79 | 0    |
| 4.....      | 1 | 20 | 3 | 75 | 19 | 8.9  | E.....  | 78 | 0    |
| 5.....      | 3 | 14 | 1 | 56 | 13 | 5.3  | SE..... | 80 | 0    |
| 6.....      | 4 | 29 | 3 | 12 | 15 | 5.3  | SE..... | 78 | 0    |
| 7.....      | 2 | 14 | 2 | 59 | 10 | 2.5  | S.....  | 79 | 0    |
| 8.....      | 2 | 9  | 1 | 37 | 6  | 4.3  | SE..... | 80 | .04  |
| 9.....      | 1 | 3  | 1 | 16 | 12 | 5.2  | E.....  | 76 | .47  |
| 10.....     | 1 | 0  | 1 | 6  | 14 | 6.6  | SE..... | 78 | 0    |
| 11.....     | 3 | 4  | 2 | 28 | 12 | 5.2  | SE..... | 78 | 1.67 |
| 12.....     | 4 | 2  | 1 | 22 | 13 | 3.8  | S.....  | 77 | .35  |
| 13.....     | 1 | 2  | 2 | 16 | 10 | 4.0  | NW..... | 76 | 0    |
| 14.....     | 3 | 5  | 3 | 34 | 21 | 10.9 | NE..... | 70 | .08  |
| 15.....     | 4 | 6  | 4 | 44 | 30 | 15.2 | NE..... | 66 | 1.96 |
| 16.....     | 1 | 1  | 2 | 12 | 23 | 12.4 | E.....  | 72 | .28  |
| 17.....     | 1 | 1  | 3 | 15 | 15 | 7.5  | SE..... | 77 | 0    |
| 18.....     | 1 | 3  | 4 | 25 | 10 | 4.8  | S.....  | 76 | .69  |
| 19.....     | 1 | 1  | 1 | 9  | 19 | 2.6  | SE..... | 76 | .02  |
| 20.....     | 2 | 6  | 2 | 31 | 0  | 4.6  | SW..... | 77 | 0    |
| 21.....     | 1 | 4  | 1 | 18 | 14 | 7.1  | NW..... | 77 | 0    |
|             |   |    |   |    |    |      | NE..... | 74 | 0    |
|             |   |    |   |    |    |      | E.....  |    |      |

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## Pollenometric and meteorologic data, New Orleans, La.—Continued.

OCTOBER, 1918—Continued.

|              | Grass<br>pollens. | Am-<br>brosia<br>pollens. | Other<br>pollens. | Esti-<br>mated<br>num-<br>ber of<br>pollens<br>per<br>cubic<br>yard<br>of air. | Maxi-<br>mum-<br>wind<br>ve-<br>locity. | Mean<br>wind<br>ve-<br>locity. | Direction of wind.   | Mean<br>tem-<br>pera-<br>ture. | Rain-<br>fall. |
|--------------|-------------------|---------------------------|-------------------|--|---|--------------------------------|--|--------------------------------|----------------|
| Oct. 22..... | 2                 | 0                         | 1                 | 9  | 12                                      | 6.0                            | E.<br>NE.<br>NE.<br>NW.<br>S.<br>SW.<br>SE.<br>SE.<br>SW.<br>SE.<br>NW.<br>SW.<br>S.<br>NW.<br>NW. | 74                             | 0              |
| 23.....      | 1                 | 0                         | 1                 | 6  | 21                                      | 7.2                            | NE.<br>NW.<br>S.<br>SW.<br>SE.<br>SE.<br>SW.<br>SE.<br>NW.<br>NW.                                  | 74                             | .45            |
| 24.....      | 2                 | 0                         | 1                 | 9  | 23                                      | 5.7                            | S.<br>SW.<br>SE.<br>SE.<br>SW.<br>SE.<br>NW.<br>SW.<br>S.<br>NW.                                   | 73                             | .29            |
| 25.....      | 1                 | 0                         | 1                 | 6  | 8                                       | 3.1                            | SE.<br>SE.<br>SW.<br>SE.<br>NW.<br>SW.<br>S.<br>NW.  | 72                             | 0              |
| 26.....      | 0                 | 0                         | 1                 | 3  | 15                                      | 6.9                            | SE.<br>SE.<br>SW.<br>SE.<br>NW.<br>SW.<br>S.<br>NW.  | 74                             | .33            |
| 27.....      | 1                 | 2                         | 2                 | 16   | 11                                      | 6.1                            | SW.<br>SE.<br>NW.<br>SW.<br>S.<br>NW.<br>NW.   | 67                             | .86            |
| 28.....      | 1                 | 0                         | 2                 | 9  | 12                                      | 6.4                            | SE.<br>NW.<br>SW.<br>S.<br>NW.<br>NW.  | 62                             | 0              |
| 29.....      | 0                 | 0                         | 0                 | 0  | 20                                      | 8.2                            | SW.<br>S.<br>NW.<br>NW.  | 76                             | 4.15           |
| 30.....      | 1                 | 0                         | 1                 | 6  | 16                                      | 9.9                            | NW.<br>NW.   | 70                             | 0              |
| 31.....      | 1                 | 0                         | 0                 | 3  | 18                                      | 8.5                            | N.<br>NW.  | 66                             | 0              |

AUGUST, 1922.

|             |   |    |   |    |    |     |   |    |      |
|-------------|---|----|---|----|----|-----|---|----|------|
| Aug. 1..... |   |    |   |    | 16 | 4.6 | SE.<br>NW.<br>NW.<br>NW.<br>W.<br>NW.<br>W.<br>W.<br>SW.<br>SW.<br>SW.<br>W.<br>W.<br>W.<br>NE.<br>E.<br>NW.<br>E.<br>SE.<br>SE.<br>SE.<br>S.<br>W.<br>NE.<br>NE.<br>NE.<br>N.<br>NW.<br>N.<br>SW.<br>SW.<br>SE.<br>E.<br>SE.<br>SE.<br>SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE. | 80 | 1.70 |
| 2.....      | 1 |    | 1 | 6  | 13 | 6.0 | NW.<br>NW.<br>NW.<br>W.<br>NW.<br>W.<br>W.<br>SW.<br>SW.<br>SW.<br>W.<br>W.<br>W.<br>NE.<br>E.<br>NW.<br>E.<br>SE.<br>SE.<br>SE.<br>S.<br>W.<br>NE.<br>NE.<br>NE.<br>N.<br>NW.<br>N.<br>SW.<br>SW.<br>SE.<br>E.<br>SE.<br>SE.<br>SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.        | 83 | 0    |
| 3.....      | 2 |    | 1 | 9  | 14 | 6.0 | NW.<br>W.<br>NW.<br>W.<br>NW.<br>W.<br>W.<br>SW.<br>SW.<br>SW.<br>W.<br>W.<br>W.<br>NE.<br>E.<br>NW.<br>E.<br>SE.<br>SE.<br>SE.<br>S.<br>W.<br>NE.<br>NE.<br>NE.<br>N.<br>NW.<br>N.<br>SW.<br>SW.<br>SE.<br>E.<br>SE.<br>SE.<br>SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.         | 84 | 0    |
| 4.....      | 1 | 1  | 2 | 12 | 10 | 4.7 | W.<br>NW.<br>W.<br>W.<br>NW.<br>W.<br>W.<br>SW.<br>SW.<br>SW.<br>W.<br>W.<br>W.<br>NE.<br>E.<br>NW.<br>E.<br>SE.<br>SE.<br>SE.<br>S.<br>W.<br>NE.<br>NE.<br>NE.<br>N.<br>NW.<br>N.<br>SW.<br>SW.<br>SE.<br>E.<br>SE.<br>SE.<br>SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.          | 86 | 0    |
| 5.....      | 1 |    |   | 3  | 22 | 4.6 | W.<br>W.<br>W.<br>SW.<br>SW.<br>SW.<br>W.<br>W.<br>W.<br>NE.<br>E.<br>NW.<br>E.<br>SE.<br>SE.<br>SE.<br>S.<br>W.<br>NE.<br>NE.<br>NE.<br>N.<br>NW.<br>N.<br>SW.<br>SW.<br>SE.<br>E.<br>SE.<br>SE.<br>SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.                                    | 83 | .64  |
| 6.....      | 2 | 1  | 1 | 12 | 13 | 4.7 | W.<br>W.<br>W.<br>SW.<br>SW.<br>SW.<br>W.<br>W.<br>W.<br>NE.<br>E.<br>NW.<br>E.<br>SE.<br>SE.<br>SE.<br>S.<br>W.<br>NE.<br>NE.<br>NE.<br>N.<br>NW.<br>N.<br>SW.<br>SW.<br>SE.<br>E.<br>SE.<br>SE.<br>SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.                                    | 82 | T.   |
| 7.....      |   | 2  | 2 | 12 | 19 | 6.5 | SW.<br>SW.<br>SW.<br>W.<br>W.<br>W.<br>NE.<br>E.<br>NW.<br>E.<br>SE.<br>SE.<br>SE.<br>S.<br>W.<br>NE.<br>NE.<br>NE.<br>N.<br>NW.<br>N.<br>SW.<br>SW.<br>SE.<br>E.<br>SE.<br>SE.<br>SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.  | 82 | T.   |
| 8.....      | 1 | 2  |   | 9  | 17 | 6.4 | SW.<br>W.<br>W.<br>W.<br>W.<br>NE.<br>E.<br>NW.<br>E.<br>SE.<br>SE.<br>SE.<br>S.<br>W.<br>NE.<br>NE.<br>NE.<br>N.<br>NW.<br>N.<br>SW.<br>SW.<br>SE.<br>E.<br>SE.<br>SE.<br>SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.  | 80 | .28  |
| 9.....      | 2 | 3  | 1 | 19 | 19 | 5.2 | W.<br>W.<br>W.<br>W.<br>W.<br>NE.<br>E.<br>NW.<br>E.<br>SE.<br>SE.<br>SE.<br>S.<br>W.<br>NE.<br>NE.<br>NE.<br>N.<br>NW.<br>N.<br>SW.<br>SW.<br>SE.<br>E.<br>SE.<br>SE.<br>SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.   | 81 | .68  |
| 10.....     | 1 | 9  | 2 | 37 | 11 | 3.9 | W.<br>W.<br>W.<br>NE.<br>E.<br>NW.<br>E.<br>SE.<br>SE.<br>SE.<br>S.<br>W.<br>NE.<br>NE.<br>NE.<br>N.<br>NW.<br>N.<br>SW.<br>SW.<br>SE.<br>E.<br>SE.<br>SE.<br>SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.   | 83 | 0    |
| 11.....     | 2 | 11 | 3 | 50 | 10 | 4.9 | E.<br>NW.<br>E.<br>SE.<br>SE.<br>SE.<br>S.<br>W.<br>NE.<br>NE.<br>NE.<br>N.<br>NW.<br>N.<br>SW.<br>SW.<br>SE.<br>E.<br>SE.<br>SE.<br>SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.  | 84 | 0    |
| 12.....     | 1 | 3  | 1 | 16 | 19 | 6.4 | E.<br>SE.<br>SE.<br>SE.<br>S.<br>W.<br>NE.<br>NE.<br>NE.<br>N.<br>NW.<br>N.<br>SW.<br>SW.<br>SE.<br>E.<br>SE.<br>SE.<br>SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.   | 80 | .41  |
| 13.....     | 2 | 4  |   | 25 | 16 | 7.4 | SE.<br>SE.<br>SE.<br>SE.<br>S.<br>W.<br>NE.<br>NE.<br>NE.<br>N.<br>NW.<br>N.<br>SW.<br>SW.<br>SE.<br>E.<br>SE.<br>SE.<br>SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.  | 76 | .07  |
| 14.....     | 1 |    |   | 3  | 14 | 5.1 | SE.<br>SE.<br>SE.<br>SE.<br>S.<br>W.<br>NE.<br>NE.<br>NE.<br>N.<br>NW.<br>N.<br>SW.<br>SW.<br>SE.<br>E.<br>SE.<br>SE.<br>SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.  | 80 | .83  |
| 15.....     |   | 2  | 2 | 12 | 13 | 5.0 | SE.<br>SE.<br>SE.<br>S.<br>W.<br>NE.<br>NE.<br>NE.<br>N.<br>NW.<br>N.<br>SW.<br>SW.<br>SE.<br>E.<br>SE.<br>SE.<br>SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.   | 82 | .02  |
| 16.....     | 1 | 3  | 1 | 15 | 11 | 4.8 | W.<br>NE.<br>NE.<br>NE.<br>N.<br>NW.<br>N.<br>SW.<br>SW.<br>SE.<br>E.<br>SE.<br>SE.<br>SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.  | 85 | T.   |
| 17.....     | 4 | 19 | 3 | 81 | 28 | 5.7 | NE.<br>NE.<br>NE.<br>N.<br>NW.<br>N.<br>SW.<br>SW.<br>SE.<br>E.<br>SE.<br>SE.<br>SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.  | 82 | .67  |
| 18.....     | 1 |    | 1 | 6  | 11 | 5.0 | NE.<br>N.<br>NW.<br>N.<br>SW.<br>SW.<br>SE.<br>E.<br>SE.<br>SE.<br>SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.  | 82 | .43  |
| 19.....     | 1 | 1  | 2 | 12 | 9  | 4.1 | N.<br>NW.<br>N.<br>SW.<br>SW.<br>SE.<br>E.<br>SE.<br>SE.<br>SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.   | 84 | 0    |
| 20.....     |   | 5  |   | 16 | 8  | 4.5 | NW.<br>N.<br>SW.<br>SW.<br>SE.<br>E.<br>SE.<br>SE.<br>SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.   | 87 | 0    |
| 21.....     | 1 | 15 | 1 | 33 | 16 | 4.5 | SW.<br>SW.<br>SE.<br>E.<br>SE.<br>SE.<br>SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.  | 86 | 0    |
| 22.....     | 3 | 21 | 3 | 84 | 21 | 8.2 | SW.<br>SE.<br>E.<br>SE.<br>SE.<br>SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.   | 84 | T.   |
| 23.....     | 1 | 13 |   | 43 | 14 | 6.2 | SE.<br>E.<br>SE.<br>SE.<br>SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.  | 84 | 0    |
| 24.....     | 1 | 12 |   | 40 | 17 | 4.9 | SE.<br>SE.<br>SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.   | 84 | T.   |
| 25.....     |   | 3  |   | 9  | 11 | 4.2 | SW.<br>W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.   | 85 | .14  |
| 26.....     |   | 2  | 1 | 9  | 11 | 5.7 | W.<br>SW.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.  | 84 | 0    |
| 27.....     | 1 | 12 | 2 | 47 | 18 | 5.7 | SW.<br>NE.<br>SE.<br>SE.<br>E.<br>E.<br>S.<br>SE.   | 83 | 0    |
| 28.....     |   | 15 | 1 | 50 | 16 | 8.7 | SE.<br>E.<br>E.<br>S.<br>SE.  | 81 | 0    |
| 29.....     |   | 11 |   | 34 | 13 | 6.4 | E.<br>E.<br>S.<br>SE.   | 84 | 0    |
| 30.....     |   | 5  | 1 | 19 | 11 | 4.9 | S.<br>SE.<br>S.<br>SE.  | 84 | 0    |
| 31.....     | 1 | 3  | 2 | 19 | 14 | 3.5 | S.<br>SE.   | 84 | .07  |

SEPTEMBER, 1922.

|              | Grass<br>pollens. | Am-<br>brosia<br>pollens. | Other<br>pollens. | Esti-<br>mated<br>num-<br>ber of<br>pollens<br>per<br>cubic<br>yard<br>of air. | Maxi-<br>mum-<br>wind<br>ve-<br>locity. | Mean<br>wind<br>ve-<br>locity. | Direction of wind. | Mean<br>tem-<br>pera-<br>ture. | Rain-<br>fall. |
|--------------|-------------------|---------------------------|-------------------|--|---|--------------------------------|--------------------|--------------------------------|----------------|
| Sept. 1..... | 2                 | 2                         |                   | 13   | 13                                      | 5.3                            | S.....             | 85                             | 0              |
| 2.....       |                   | 3                         | 1                 | 13   | 14                                      | 4.9                            | SE.....            | 84                             | 0              |
| 3.....       |                   | 6                         |                   | 19   | 14                                      | 5.1                            | SE.....            | 84                             | .03            |
| 4.....       |                   | 2                         |                   | 6  | 11                                      | 5.4                            | NE.....            | 83                             | 0              |
| 5.....       | 2                 | 7                         |                   | 28   | 16                                      | 8.0                            | SE.....            | 82                             | T.             |
| 6.....       |                   | 8                         |                   | 25   | 10                                      | 4.2                            | SW.....            | 85                             | 0              |
| 7.....       |                   | 4                         |                   | 12   | 10                                      | 4.0                            | NE.....            |                                |                |
| 8.....       |                   | 2                         |                   | 6  | 16                                      | 7.2                            | W.....             | 83                             | .11            |
| 9.....       | 1                 | 5                         | 1                 | 22   | 18                                      | 7.0                            | SE.....            | 82                             | .26            |
| 10.....      |                   | 4                         |                   | 13   | 14                                      | 5.0                            | SE.....            | 81                             | T.             |
| 11.....      |                   | 19                        | 3                 | 65   | 15                                      | 6.5                            | E.....             | 82                             | .29            |
| 12.....      |                   | 17                        |                   | 53   | 14                                      | 5.8                            | NE.....            | 82                             | 0              |
| 13.....      |                   | 21                        | 3                 | 74   | 18                                      | 7.4                            | NE.....            | 76                             | T.             |
| 14.....      |                   | 7                         |                   | 25   | 14                                      | 5.5                            | SE.....            | 79                             | T.             |
| 15.....      |                   | 3                         |                   | 9  | 15                                      | 5.4                            | SE.....            | 78                             | .12            |
| 16.....      |                   | 10                        |                   | 31   | 9                                       | 5.0                            | SE.....            | 80                             | .16            |
| 17.....      |                   | 11                        |                   | 34   | 12                                      | 5.8                            | NE.....            | 80                             | T.             |
| 18.....      | 3                 | 128                       | 5                 | 421  | 23                                      | 9.3                            | E.....             | 78                             | T.             |
| 19.....      | 1                 | 116                       |                   | 363  | 21                                      | 10.0                           | NE.....            | 79                             | 0              |
| 20.....      |                   | 84                        |                   | 260  | 14                                      | 7.3                            | E.....             | 78                             | 0              |
| 21.....      |                   | 32                        |                   | 161  | 10                                      | 5.1                            | E.....             | 80                             | 0              |
| 22.....      |                   | 34                        |                   | 118  | 13                                      | 5.4                            | E.....             | 81                             | 0              |
| 23.....      |                   | 26                        |                   | 81   | 14                                      | 5.2                            | NE.....            | 80                             | 0              |
| 24.....      |                   | 14                        | 1                 | 47   | 8                                       | 4.7                            | E.....             | 82                             | 0              |
| 25.....      |                   | 11                        |                   | 34   | 9                                       | 4.2                            | NE.....            | 82                             | 0              |
| 26.....      |                   | 20                        |                   | 62   | 9                                       | 4.0                            | SE.....            | 82                             | 0              |
| 27.....      |                   | 22                        |                   | 68   | 13                                      | 5.6                            | NE.....            | 80                             | 0              |
| 28.....      |                   | 45                        | 1                 | 143  | 16                                      | 7.5                            | E.....             | 78                             | 0              |
| 29.....      | 2                 | 110                       | 3                 | 357  | 20                                      | 8.9                            | E.....             | 79                             | 0              |
| 30.....      |                   | 88                        |                   | 173  | 18                                      | 7.9                            | NE.....            | 78                             | 0              |

OCTOBER, 1922.

[illegible]

*Pollenometric and meteorologic data, New Orleans, La.—Continued.*

OCTOBER, 1922—Continued.

|              | Grass<br>pollens. | Ambrosia<br>pollens. | Other<br>pollens. | Estimated<br>number of<br>pollens<br>per<br>cubic<br>yard<br>of air. | Maximum<br>wind<br>velocity. | Mean<br>wind<br>velocity. | Direction of wind. | Mean<br>temperature. | Rain-<br>fall. |
|--------------|-------------------|----------------------|-------------------|--|------------------------------|---------------------------|--------------------|----------------------|----------------|
| Oct. 20..... |                   | 12                   | 2                 | 43   | 12                           | 6.6                       | E.....             | 69                   | 0              |
| 21.....      |                   | 10                   | 1                 | 34   | 12                           | 5.7                       | NE.....            | 73                   | 0              |
| 22.....      |                   | 8                    |                   | 25   | 10                           | 5.4                       | SE.....            | 74                   | 0              |
| 23.....      |                   | 7                    |                   | 22   | 11                           | 4.7                       | NE.....            | 70                   | .01            |
| 24.....      |                   | 13                   | 2                 | 46   | 13                           | 6.8                       | E.....             | 65                   | 0              |
| 25.....      |                   | 9                    |                   | 28   | 13                           | 7.0                       | E.....             | 66                   | .14            |
| 26.....      | 1                 | 6                    |                   | 22   | 20                           | 11.4                      | NE.....            | 64                   | .51            |
| 27.....      |                   | 11                   |                   | 34   | 19                           | 8.0                       | E.....             | 72                   | 0              |
| 28.....      | 7                 | 7                    |                   | 25   | 15                           | 7.8                       | NE.....            | 69                   | 0              |
| 29.....      |                   | 16                   | 2                 | 56   | 12                           | 7.2                       | E.....             | 72                   | T.             |
| 30.....      |                   | 4                    | 2                 | 19   | 11                           | 5.7                       | NW.....            | 74                   | T.             |
| 31.....      |                   | 3                    | 2                 | 16   | 11                           | 6.0                       | SW.....            | 76                   | 0              |

The tables of the physical reports contain the records of the atmospheric-pollen plates (sample plates shown in Figs. 1-4) in relation to the daily maximum and mean wind velocities and directions, the estimated number of pollens per cubic yard of air, the mean temperatures, and the rainfall. They give the number of grass pollens, of *Ambrosia* pollens (common and giant ragweed, Figs. 1 and 2), and of "other pollens," the latter including the docks (Fig. 4), amaranths, chenopods, marsh elders, and cockle burs, all of which give a positive reaction for hay fever, but, in view of variations in different localities, are only of local importance.

## HAY-FEVER AND ASTHMA CLINIC.

The clinical data on which this analysis is based is taken from the records of the Hay-fever and Asthma Clinic of the Charity Hospital, New Orleans, La. This clinic was established in 1918, and has grown steadily in popularity and attendance. The number visiting the triweekly clinics during the fall hay-fever season of 1922 frequently exceeded 100 patients, including both white and colored.

All items of importance in the history of the disease, or for the immunizing treatment, are noted in these records, which include the following data:

1. The age of the patient, the time at which the hay fever developed, and the duration of the attack. Also the sex and color of the patient.

2. The months in which the hay-fever attacks are present, as this is a check on the diagnostic tests.



FIG. 1.



FIG. 2.

Photomicrographs of atmospheric-pollen plates. Fig. 1, ragweed pollens, X 250 diameters; September 29, 1916. Fig. 2, ragweed and Johnson grass pollens, X 250 diameters; September 25, 1918.



FIG. 3.



FIG. 4.

Photomicrographs of atmospheric-pollen plates. Fig. 3, tree pollens, X 250 diameters; March 25, 1921. Fig. 4, pine and curly dock pollens, X 250 diameters; April 8, 1922.



3. The residence of the patient (as the locality frequently has an important bearing on the severity of the attacks, and on the corresponding degree of immunity to be attained).

4. Near relatives who have, or have had, hay fever or asthma.

5. The condition of the nose, and any operation that may have been performed.

6. Condition of the chest and heart, pulse pressure, urinalysis.

7. Report of radiograph of chest (asthma cases only.)

8. Complications, such as asthma, bronchitis, affections of the accessory sinuses, ears, throat, eyes, and skin.

9. Diagnostic tests, first of the three major and five minor groups of pollen,<sup>2</sup> and afterwards, if required, of other proteins that may form the principal or complicating cause. The results of these tests, indicating the sensitivity of the patient, are recorded on a percentage basis, and form a constant guide for the immunizing doses.

10. On the back of the chart is a complete record of each dose administered, including the date, the number of units of the pollen extract or the amount of vaccine, and whether this is stock or autogenous, and the name of the manufacturer or the laboratory which prepared it. Finally, special clinical notes, such as the degree of the local or general reaction, dates of severe paroxysms, and the condition of the patient generally.

Such complete data, and based on such a large number of cases, necessarily have marked clinical value, which is especially important in hay fever and asthma, in which the symptoms, course, and seasonal variations are so largely influenced by weather and other extraneous conditions.

#### DATES OF INCIPIENT FALL HAY FEVER ATTACKS.

Many patients have the belief that their attacks commence on a certain date of each year; but as the amount of pollen necessary to develop the attack is influenced not only by the stage of growth of the incriminating weeds but also by wind conditions, this regular periodicity is rarely the case, the occasions on which such regularity happens being simply coincidences.

Our clinical records show that minor attacks of fall (*Ambrosia*) hay fever (average, 8 per cent) were recorded on the following dates (the maximum velocity of the wind and its direction on the same dates being also given): 1917, August 2 (12 miles, NW.); 1918, August 10 (22 miles, SE.); 1919, August 6 (14 miles, NW.); 1920, August 3 (12 miles, NW.); 1921, August 6 (14 miles, W.); 1922, August 11 (11 miles, NW.).

The common and giant ragweeds in the Southern States begin to pollinate about August 1, but it is not until August 24 that a consider-

<sup>2</sup> Hay Fever and Asthma: Cause, Prevention, and Cure. By Wm. Scheppegrell. Lea & Febiger, 1922.

able number of these weeds are in bloom, and not until about September 10 that the full stage of pollination is reached, the latter being the average date for most of the States east of the one-hundredth meridian. With a sufficiently large number of plants in bloom, the velocity of the wind and its direction are the determining factors of the attacks.

The early cases of fall hay fever usually develop in patients of a high degree of sensitivity, or with less sensitivity but with excessive exposure, as, for instance, when their residence is surrounded with large areas of weeds or they visit weed-infested localities. The majority of patients, however, do not develop their attacks until the air contains a considerable amount of pollen, the number of patients varying with their degree of sensitivity.<sup>2</sup> An average of 17 per cent developed their initial attacks on the following dates: 1917, August 19 (17 miles, NW.); 1918, August 16 (12 miles, NW.); 1919, August 17 (20 miles, NW.); 1920, August 24 (10 miles, NE.); 1921, August 18 (12 miles, NW.); 1922, August 28 (15 miles, E.).

After these dates, initial attacks developed in the remaining cases until about September 10, the final dates of the initial attacks being as follows: 1917, September 8 (14 miles, NW.); 1918, September 10 (15 miles, E.); 1919, September 11 (16 miles, NE.); 1920, September 3 (23 miles, N.); 1921, September 11 (26 miles, NE.); 1922, September 13 (18 miles, NE.).

There is a small percentage of patients whose resistance is so high that in some years they fail to have hay fever at all, and they develop attacks in other years only at times of unusual atmospheric pollen infestation. Such a condition occurred on the following dates: September 29, 1916—the number of pollens per cubic yard air reached 365, and the wind 22 miles per hour from the northwest; September 21, 1918—357 pollens, wind 19 miles from northeast; September 19, 1920—296 pollens, wind 22 miles from northeast; September 14, 1921—382 pollens, wind 24 miles from the north; and September 18, 1922—421 pollens, wind 23 miles from northeast. On account of the long and irregular intervals of their attacks, few of these cases are recognized as hay fever.

These records show, therefore, that the initial attacks of hay fever vary within certain limits in different years, and that they are always associated with wind disturbances. In the locality of our station A, from the records of which these data are taken, the large weed areas are toward the north, east, and west, so that the winds associated with these attacks are usually from those directions. This would not be the case, however, in stations in which the principal weed areas were differently situated.

<sup>2</sup> Hay Fever and Asthma: Cause, Prevention, and Cure. By Wm. Scheppegrell. Lea & Febiger, 1922.

## DATES OF GREATEST INTENSITY.

The period of greatest intensity of fall hay fever in the Eastern, Middle, and Southern States is in September, as the common and giant ragweeds, the principal cause of the disease, reach their full stage of pollination during this month, and during a large portion of September the wind is sufficiently high to cause a general distribution of the pollen. At our New Orleans station, for instance, in September, 1917, the wind reached a velocity of 10 or more miles per hour during 28 days; in September, 1918, during 25 days; in September, 1919, during 26 days; in September, 1920, during 25 days; in September, 1921, during 24 days; and in September, 1922, during 26 days. The active pollination of the weeds supplying the pollen and the general wind disturbances for distribution of the pollen are therefore the reasons that September is the *bête noir* of hay-fever sufferers.

The rain is nature's most effective means of precipitating the pollen for the relief of the patient; but, unfortunately, the rainfall during September is usually below the average in most hay-fever sections. At our New Orleans station, for instance, the rainfall during August and September, respectively, was as follows: 1917—August 6.92 inches, September 2.69 inches; 1918—August 6.19 inches, September 4.82 inches; 1919—August 7.38 inches, September 2.93 inches; 1920—August 4.18 inches, September 6.47 inches; 1921—August 3.09 inches, September 3.51 inches; 1922 (omitting a heavy rainfall on August 1)—August 3.56 inches, September 0.93 inch.

It will be noted that with exception of September, 1920, in which month it totaled 6.47 inches, the rainfall for this month for the other years was between 2.69 and 4.18 inches. The records of our clinic also show that the general average of hay-fever attacks during September, 1920, was considerably below the general average, and that during September, 1922, when the rainfall was only 0.93 inch, they were unusually severe.

These records also show that the seasons of marked intensity of fall hay fever were as follows: 1917, August 30 to October 12; 1918, August 17 to September 29; 1919, August 24 to September 26; 1920, September 3 to October 7; 1921, August 18 to October 13; 1922, September 18 to October 3.

## TERMINATION OF THE ATTACKS.

The cessation of the fall hay fever, uncomplicated with mixed infection, was as follows: 1917, October 24; 1918, October 28; 1919, October 23; 1920, October 11; 1921, October 24; 1922, October 26. The long hay-fever season in the Southern States is due to the mildness of the climate, which prolongs the pollinating season

of the ragweeds. At our station at Hendersonville, N. C. (altitude, 2,250 feet), the cool nights check the pollination much earlier, and the hay-fever season is rarely prolonged after September 30.

#### LOCAL TEMPORARY RELIEF.

Marked natural relief from the attacks during the hay-fever season, except in localities where the wind may blow from a noninfected area, as on the seashore, results from a general rain that settles the pollen. On October 17, 1916, a rain of 2.58 inches caused the ragweed pollen to disappear from the plates during that day, showing the air to be free of pollens, and this was also the case the following day (1 per square centimeter), in spite of the fact that the wind had reached a velocity of 24 miles per hour and was from a northerly direction. The complete local precipitation of pollen, and the consequent relief to hay-fever sufferers, also occurred in 1917 on August 17, 28, and September 15; 1918—August 19 to 21, September 20, October 11; 1919—August 18 to 24, and September 13; 1920—only on September 21; 1921—August 24 and September 25; 1922—October 3 only. The rains on these occasions were so continued and extensive that the absence of atmospheric pollen gave entire relief from hay fever for several successive days.

Unless the physician is familiar with the natural course of hay fever and the influence of weather and other extraneous conditions, the apparent beneficial results of the treatment may be misleading. The numerous so-called "cures" of hay fever depend mainly on these natural causes for their apparent benefits. In no other disease is it so important to take cognizance of the numerous circumstances that may affect the course of hay fever, and the successful immunologist should be fully equipped for making careful records in order to attain success in the mastery of this disease.

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### SPLEEN AND BLOOD EXAMINATIONS FOR MALARIA.

#### A STUDY OF THE RELATIVE MERITS OF THE SPLEEN AND BLOOD PARASITE INDICES FOR DETERMINING MALARIA PREVALENCE AS FOUND IN DUNKLIN COUNTY, MO.

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The positive diagnosis of malaria by the blood smear method is very reliable in the hands of a trained laboratory diagnostician. However, the method is time consuming and is usually not available on short notice. This is especially true with reference to the public health official who, in doing field work, must often examine a large number of individuals and know the results promptly. The development of a method of diagnosis equally reliable and less time consuming would greatly facilitate the work in the field. It is the pur-

pose of this paper to present certain evidence of the value of spleen palpation, obtained during the course of investigations in child hygiene made by the United States Public Health Service.

During December, 1921, Maxey and Coogle, of the malaria field forces, United States Public Health Service, made a malaria survey of a large group of boys of school age in Dunklin County, Mo. (1). It was the privilege of the writer to go over essentially the same ground during the months from August, 1922, to March, 1923. The data collected by Maxey and Coogle and some of the data collected by the writer are combined in this report as evidence of the value of the enlarged spleen method in demonstrating the malaria prevalence of a community. It is a yardstick, applicable at once in the field rather than at some later date in the laboratory.

#### METHODS EMPLOYED.

*Blood smears.*—As a routine procedure, blood smears were taken of all the children examined in a given school. The semithick method was used. Each slide received at least 10 minutes of examination in the hands of a trained technician, unless found positive sooner.

*Spleen.*—Similarly, palpation of the spleen was routine for all the grammar-school children, irrespective of sex. The examination was made with the child in the standing position and leaning forward until the body made approximately a right angle. In this position most children relax their abdominal walls sufficiently to allow deep palpation during a deep inspiration and expiration. Simultaneously with the inward pressure of the examining fingers, forward pressure is made with the palm of the other hand placed dorsally over the region of the spleen. Boys and girls were examined separately and away from the remainder of the class. Maxey and Coogle used essentially the same technique.

The method is believed to give consistent results. One school of 114 children with a high percentage of positives was reexamined with the greatest care, and there was no important difference in the total number of palpable spleens found. Examination with the relaxation of the abdomen is fully as good as that made with the patient lying down with the knees flexed.



## DATA ON BLOOD SMEAR AND SPLEEN METHODS.

A comparison between the blood smear findings and the palpable spleens is shown in Table I.

TABLE I.—*Relative value of blood smear and spleen methods as a malaria index, as shown by the examination of 880 school children (both sexes) in Dunklin County, Mo.*

| Name of school.       | Date of examination. | Total number examined. | Positive smears. |           | Palpable spleens. |           |
|-----------------------|----------------------|------------------------|------------------|-----------|-------------------|-----------|
|                       |                      |                        | Number.          | Per cent. | Number.           | Per cent. |
| Beech Corner.....     | Jan. 24, 1923        | 114                    | 26               | 22.8      | 20                | 17.5      |
| Cardwell Grammar..... | Oct. 1, 1922         | 130                    | 4                | 3.1       | 2                 | 1.5       |
|                       | Jan. 18, 1923        | 128                    | 7                | 5.5       | 8                 | 6.2       |
| Coldwater.....        | Feb. 8, 1923         | 101                    | 0                | 0.0       | 1                 | 1.0       |
| Cottrill.....         | Oct. 30, 1922        | 56                     | 2                | 3.6       | 3                 | 5.4       |
| Cotton Plant.....     | Jan. 30, 1923        | 62                     | 2                | 3.2       | 3                 | 4.8       |
| Gideon Grammar.....   | Nov. 28, 1922        | 33                     | 0                | 0.0       | 0                 | 0.0       |
| Glendonville.....     | Sept. 13, 1922       | 73                     | 0                | 0.0       | 1                 | 1.4       |
| Hartzell.....         | Nov. 8, 1922         | 30                     | 2                | 6.7       | 3                 | 10.0      |
| Kennet Grammar.....   | Oct. 4, 1922         | 49                     | 1                | 2.0       | 3                 | 6.1       |
| Peanut.....           | Nov. 2, 1922         | 44                     | 2                | 4.5       | 0                 | 0.0       |
| Wilhelmina.....       | Sept. 21, 1922       | 60                     | 0                | 0.0       | 1                 | 1.7       |
| Total.....            |                      | 880                    | 46               | 5.2       | 45                | 5.1       |

The same group of 880 children was examined for palpable spleens and blood parasites. Forty-six, or 5.2 per cent, were found to have parasites in their blood, whereas 45, or 5.1 per cent, had palpable spleens—a difference of only 0.1 per hundred in the two methods.

TABLE II.—*Number of children with both positive blood and spleen; also the number with only one index positive.*

| Total number of children. | Number with positive spleen and blood. | Number with positive blood and negative spleen. | Number with positive spleen and negative blood. |
|---------------------------|--|---|---|
| 880                       | 21                                     | 25  | 24  |

That the groups of children having positive bloods and palpable spleens, respectively, were not the same children, is shown in Table II. In this group of 880 children, only 21 had both positive blood and spleen, 25 had positive blood and negative spleen, and 24 had positive spleen and negative blood. Accepting both indices as evidence of malaria infection, we find 70 infected children in this group. On the basis of blood parasites alone only 46 were found, and by the spleen method alone, 45. Thus, each method falls short of the two methods combined, but in each case the difference is essentially the same.

In the Beech Corner school the parasite rate ran 5.3 per hundred higher than the spleen rate. Believing that perhaps the first examination was inaccurate, these children were again examined in a most careful manner and the same number of positives were found.

There was also considerable variation between the two indices in the Cardwell school as found on two different examinations. The children who were examined in October, 1922, were those who lived in town and did not go out to pick cotton. The group examined in January, 1923, consisted of more rural children, the cotton pickers. The much greater opportunity for infection during the vacations and cotton picking is believed to explain this higher rate. Both indices increased, especially the spleen index.

TABLE III.—A comparison of certain methods for the determination of malaria prevalence as shown by two surveys in Dunklin County, Mo.

#### A. HISTORY INDEX.

| Date of survey.                      | Total number examined. | Positive within 2 years. |           | Positive more than 2 years. |           | Date of infection not determined. <sup>1</sup> |           |
|--------------------------------------|------------------------|--------------------------|-----------|-----------------------------|-----------|--|-----------|
|                                      |                        | Number.                  | Per cent. | Number.                     | Per cent. | Number.  | Per cent. |
| December, 1921.....                  | 789                    | 238                      | 30.8      |                             |           |  |           |
| August, 1922, to February, 1923..... | 2,437                  | 508                      | 21.0      | 195                         | 8.0       | 229  | 9.4       |

#### B. SPLEEN INDEX.

| Date of survey.                      | Total number examined. | Number found positive. | Per cent positive. |
|--------------------------------------|------------------------|------------------------|--------------------|
| December, 1921.....                  | 980                    | 70                     | 7.9                |
| August, 1922, to February, 1923..... | 1,355                  | 80                     | 5.9                |

#### C. BLOOD PARASITE INDEX.

|                                      |       |    |     |
|--------------------------------------|-------|----|-----|
| December, 1921.....                  | 395   | 29 | 7.3 |
| August, 1922, to February, 1923..... | 1,044 | 56 | 5.4 |

<sup>1</sup> Practically all of these occurred within two years.

In Table III there is given a summary of all the data collected by Maxcy and Coogle in December, 1921, and of that collected by the writer a year later. Maxcy and Coogle examined only boys in schools selected because of their proximity to the swamps, using only volunteers for blood smears. The writer included both boys and girls; and in getting blood smears in a school every child was included. Some of the schools included in the last survey were not located in the swamp sections. Again, the mosquitoes were less prevalent in the summer and fall of 1922 because of a longer dry season. It was to be expected, therefore, that the indices for the two surveys would not be the same. However, if independent workers are equally proficient, the parasite-spleen *ratio* should be the same in the same community at the same time of the year, provided both methods are consistently reliable. Maxcy and Coogle report a parasite index

of 7.3 and a spleen index of 7.9. This is a ratio of parasite to spleen index of 1 to 1.08. The writer found a parasite index for the county of 5.4 and a spleen index of 5.9, or a ratio of 1 to 1.09.

Barber and Coogle (2), working in Mitchell County, Ga., during January, February, and March, 1921, report a spleen index of 2.0 per cent among the white boys of the county. This is low, but it followed a summer and fall of intensive quinine medication. In two schools they found a spleen rate of 4.9 among the boys and a parasite rate of 4.7 among the boys and girls combined. This is a ratio of 1 to 1.04. The number so examined was small and not entirely the same group; yet the figures are indicative of what might be expected.

TABLE IV.—Percentage of positive blood smears and of enlarged spleens in children of the present study, according to age distribution.

| Age.       | Total number examined. | Positive blood. |           | Positive spleen. |           |
|------------|------------------------|-----------------|-----------|------------------|-----------|
|            |                        | Number.         | Per cent. | Number.          | Per cent. |
| 5.....     | 7                      | 0               | .....     | 0                | .....     |
| 6.....     | 86                     | 9               | 10.4      | 4                | 4.6       |
| 7.....     | 81                     | 5               | 6.2       | 3                | 3.7       |
| 8.....     | 110                    | 3               | 2.7       | 9                | 8.2       |
| 9.....     | 122                    | 8               | 6.5       | 7                | 5.7       |
| 10.....    | 93                     | 7               | 7.5       | 8                | 8.6       |
| 11.....    | 103                    | 4               | 3.9       | 3                | 2.9       |
| 12.....    | 91                     | 3               | 3.3       | 2                | 2.2       |
| 13.....    | 106                    | 7               | 6.6       | 7                | 6.6       |
| 14.....    | 94                     | 5               | 5.3       | 4                | 4.2       |
| 15.....    | 66                     | 2               | 3.0       | 1                | 1.6       |
| 16.....    | 31                     | 2               | 6.5       | 0                | .....     |
| 17.....    | 18                     | 0               | .....     | 0                | .....     |
| 18.....    | 14                     | 0               | .....     | 0                | .....     |
| 19.....    | 12                     | 0               | .....     | 0                | .....     |
| Total..... | 1,034                  | 55              | 5.3       | 48               | 4.7       |

Table IV shows the age distribution of the children in the present study with positive blood smears or palpable spleens. In this group age seems to have no effect on the frequency of either condition. This is not in agreement with the findings of Stephens and Christophers (3), who found that in children under 2 years of age the parasite rate is considerably above the spleen rate. With the increase in age, the ratio of the two indices gradually reverses until, after the age of 10, the spleen rate is much higher than the parasite rate. These figures are based on data obtained in India, where cinchonization is probably not very widespread. It may be said that the enlarged spleen of chronic malaria is to a certain extent the accumulative result of one or many infections. Its development and disappearance is gradual. In Dunklin County, Mo., we are dealing with a population which is partially cinchonized from time to time. This certainly has the effect of distorting the age distribution curve as compared with a population not so treated.



In estimating the amount of malaria in a community from either the parasite or the spleen index, it is important to know something of the antimalaria medication in the community, whether the medicine taken is "chill tonic" or quinine, and if the latter how near it comes to being standard treatment.

TABLE V.—*Prevalence of antimalaria medication among children with positive malaria histories.*

| Number children questioned. | Number taking medicine. | Per cent taking medicine. |
|-----------------------------|-------------------------|---------------------------|
| 313                         | 296                     | 94.6                      |

Of 313 children having a positive malaria history within two years who were questioned regarding the taking of medicine, 296, or 94.6 per cent, stated that they took either quinine or "chill tonic" or both. About one-half of this group took quinine, but none in quantities even approaching standard treatment quantities. At the Beech Corner school over 85 per cent of the children gave a history of having taken quinine in some form during the previous year, regardless of any chills during that time. In other words, quinine medication in some form is nearly universal in the heavily infected sections of Dunklin County, Mo.

TABLE VI.—*Hemoglobin readings (Tallquist) on 750 school children in Dunklin County, Mo.*

|                               | Total number examined. | Hemoglobin under 80 per cent. |           |
|-------------------------------|------------------------|-------------------------------|-----------|
|                               |                        | Number.                       | Per cent. |
| Negative blood and spleen.... | 675                    | 75                            | 11.1      |
| Positive blood or spleen..... | 75                     | 16                            | 21.4      |

The hemoglobin count (Table VI) is presented merely as offering more evidence of the destructive effect of malaria on the blood hemoglobin. The lowest percentage of hemoglobin found in the children examined was 35 per cent (Tallquist). Most of the positive cases gave a reading between 60 and 70 per cent. The possible presence of intestinal parasites was not ruled out by microscopic examination; it may be stated, however, that some of the most anemic children were given quinine, and their hemoglobin promptly increased.

#### DISCUSSION.

It is not necessary here to go into all the causes of splenic enlargement or the frequency with which it occurs. Reference is made to the Public Health Reports (4), where will be found a good abstract

of the literature dealing with this subject. In children of grammar-school age infected with malaria, splenic enlargement occurs at some time in practically 100 per cent of the untreated cases. There is no other disease causing splenic enlargement sufficiently prevalent in the United States to give an appreciable percentage of enlarged spleens among the school children. Other causes for splenomegaly have been variously reported as less than 1 per cent for this country and for England (5). It is safe to say that a marked increase over this 1 per cent in a community where malaria is known to be endemic will be due to that disease.

It must be remembered that the present study was made on a school population which is more or less cinchonized. These children have been taught that quinine is a "cure all." The amount of quinine taken, however, was usually small. Quinine medication influences the parasite index; small quantities are oftentimes sufficient to render the peripheral blood parasite free. Complete sterilization causes the enlarged spleen to return to normal size. Apparently relatively small doses of quinine taken at irregular intervals during the course of an infection will prevent the spleen from becoming palpable in many cases. As an illustration, three boys at the Beech Corner school were found to have definitely enlarged, hard, and nontender spleens and positive blood smears, both in 1921 and 1923. After one month of small, irregular doses of quinine their spleens had so reduced as to be scarcely palpable. In two acute cases the enlarged spleen disappeared after a few doses of standard treatment.

#### SUMMARY.

Data relative to the percentage of enlarged spleens and positive bloods were collected from a portion of the school children in Dunklin County, Mo., by independent investigators, working at the same time of the year but in different years. A summary of these two investigations reveals that the spleen and parasite indices at each investigation closely approximate. Also that the parasite-spleen ratio was essentially the same in the two studies. From this we may conclude that in this particular community, at least, the two indices have the same value in measuring malaria prevalence. The ease and rapidity of application of the spleen method are much in its favor.

#### REFERENCES.

- (1) K. F. Maxcy and C. P. Coogle: Methods for Determining Malaria Prevalence: The Spleen Rate of School Boys. *Southern Med. Jour.* 16:4, April, 1923.
- (2) M. A. Barber and C. P. Coogle: Spleen Examinations of School Boys in Mitchell County, Ga. *Public Health Reports*, 36, 14, April 8, 1921. Reprint No. 653.
- (3) Stephens and Christophers: Practical Study of Malaria. Liverpool, University Press, 1908, p. 211.
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## THE EAST HARLEM HEALTH CENTER DEMONSTRATION.

### Successful Coordination of the Health Activities of 22 Organizations in a Large City.

An increase of 81 per cent in the services of health agencies to 112,000 people, with an increase of but 9 per cent in cost, is the record announced by the East Harlem Health Center, which is experimenting in the coordination of health work by bringing together for cooperative effort 22 health and social agencies. This announcement is made at the end of the first half of the experimental period of three years, for which time the New York Chapter of the American Red Cross, sponsor for the demonstration, has guaranteed its existence by providing \$168,000.

These agencies have been housed in one building, and, headed by the New York City Department of Health (which maintains the largest group of services), include the following:

*Health agencies.*—The American Red Cross, the American Social Hygiene Association, the Association for the Prevention and Relief of Heart Disease, the New York Committee on Dispensary Development, the Jefferson Auxiliary, the New York Tuberculosis Association, and the New York State Charities Aid Association.

*Nursing organizations.*—The Association for the Aid of Crippled Children, the Henry Street Visiting Nurse Service, the Maternity Center Association, the New York Diet Kitchen Association, and the East Harlem Nursing and Health Demonstration.

*Family welfare.*—The Association for Improving the Condition of the Poor, the Catholic Charities, the Charity Organization Society, and the United Hebrew Charities.

The work has been carried on by a council of representatives from each of the cooperating agencies and a selected group of neighborhood leaders.

The district included is bounded by the Harlem River, Ninety-ninth Street, the East River, and Third Avenue, covers 87 city blocks, and has a population of 112,000 people.

Among the outstanding accomplishments of this demonstration are (1) successful practical coordination, (2) greatly increased efficiency with only slight increase in cost, (3) enlistment of interest of the people, (4) intensive demonstrations, and (5) highly successful follow-up in school health work.

In regard to practical coordination it is stated that the 22 health and allied agencies worked together for the period under report with no important difficulties.

An increase in efficiency of 81 per cent in health service with less than 10 per cent additional cost is shown by a comparison with the records of all the cooperating agencies for the three-year period

immediately preceding the opening of the center. It is stated that the amount of this gain in efficiency is based on such tangible services as a nursing visit to a home, or a visit to a clinic, and that if educational work were included, such as the distribution of pamphlets or the attendance at meetings, a much larger gain would be shown.

It is believed by the officers of the center that so-called "health education" by means of exhibits and literature is not the most effective means of educating the people; and so the workers have gone out to the homes of the 20,000 families and have interested the members of these families through friendly visits, advice, and practical help.

As the health center could not give the full service needed by 112,000 people, because, as the report states, "this would take vastly more money than the public has yet learned to invest in its local health work," a demonstration is being conducted within the health center area in order to determine what might be considered adequate nursing and health service for a district of 40,000 people, what such service costs, and how the work can best be done. In order to do this the East Harlem Nursing and Health Demonstration has been established, combining four agencies. Intensive work is being carried on in two of the eight sanitary districts of the area. The annual budget is \$65,000, half of which is contributed by the four cooperating organizations and half by the Rockefeller Foundation.

In school health work, the nurses of the center assist the school physicians in their physical examinations of the children; and during the summer, physical defects that have been discovered in the school children are followed up for correction by the nurses.

The East Harlem Health Center has evidently demonstrated successful cooperation of health agencies and a readiness of the local community to enter into health work under the leadership of an active health center. The work of this center, in which all of the local health and allied agencies of a large city have come together and worked together in one building for the common welfare, should be a matter of keen interest to other health and welfare organizations and, more especially, to all of the larger cities of the country.

## DEATHS DURING WEEK ENDED JUNE 30, 1923.

Summary of information received by telegraph from industrial insurance companies for week ended June 30, 1923, and corresponding week of 1922. (From the Weekly Health Index, July 5, 1923, issued by the Bureau of the Census, Department of Commerce.)

|  | Week ended<br>June 30, 1923. | Corresponding<br>week, 1922. |
|--|------------------------------|------------------------------|
| Policies in force.....                                     | 53, 525, 793                 | 50, 170, 299                 |
| Number of death claims.....                                | 9, 607                       | 8, 251                       |
| Death claims per 1,000 policies in force, annual rate..... | 9.4                          | 8.6                          |

Deaths from all causes in certain large cities of the United States during the week ended June 30, 1923, infant mortality, annual death rate, and comparison with corresponding week of 1922. (From the Weekly Health Index, July 5, 1923, issued by the Bureau of the Census, Department of Commerce.)

| City                                 | Week ended<br>June 30, 1923. |                             | Annual<br>death<br>rate per<br>1,000,<br>cor-<br>responding<br>week,<br>1922. | Deaths under<br>1 year.            |                                      | Infant<br>mor-<br>tality<br>rate,<br>week<br>ended<br>June 30,<br>1923. <sup>2</sup> |
|--------------------------------------|------------------------------|-----------------------------|---|------------------------------------|--------------------------------------|--|
|                                      | Total<br>deaths.             | Death<br>rate. <sup>1</sup> |   | Week<br>ended<br>June 30,<br>1923. | Cor-<br>responding<br>week,<br>1922. |  |
| Total.....                           | 6, 693                       | 11.9                        | 10.8  | 820                                | 710                                  | .....  |
| Akron, Ohio.....                     | 12                           | 3.0                         | 5.0   | 1                                  | 3                                    | 12   |
| Albany, N. Y. <sup>3</sup> .....     | 25                           | 11.1                        | 16.6  | 4                                  | 2                                    | 88   |
| Atlanta, Ga.....                     | 63                           | 14.7                        | 21.1  | 11                                 | 16                                   | 2  |
| Baltimore, Md. <sup>3</sup> .....    | 204                          | 13.8                        | 12.4  | 25                                 | 25                                   | 74   |
| Birmingham, Ala.....                 | 66                           | 17.6                        | 12.6  | 6                                  | 6                                    | .....  |
| Boston, Mass.....                    | 201                          | 13.6                        | 12.1  | 22                                 | 15                                   | 63   |
| Bridgeport, Conn.....                | 22                           | 8.0                         | 6.9   | 3                                  | 3                                    | 41   |
| Buffalo, N. Y.....                   | 108                          | 10.5                        | 11.5  | 19                                 | 17                                   | 80   |
| Cambridge, Mass.....                 | 23                           | 10.8                        | 13.2  | 0                                  | 2                                    | 0  |
| Camden, N. J. <sup>3</sup> .....     | 19                           | 8.0                         | 15.0  | 1                                  | 8                                    | 17   |
| Chicago, Ill.....                    | 623                          | 11.3                        | 9.8   | 74                                 | 66                                   | .....  |
| Cincinnati, Ohio.....                | 126                          | 16.2                        | 12.5  | 9                                  | 8                                    | 59   |
| Cleveland, Ohio <sup>3</sup> .....   | 177                          | 10.4                        | 8.8   | 25                                 | 21                                   | 68   |
| Columbus, Ohio.....                  | 65                           | 13.0                        | 12.1  | 7                                  | 5                                    | 73   |
| Dallas, Tex.....                     | 43                           | 12.6                        | 12.4  | 11                                 | 6                                    | .....  |
| Dayton, Ohio.....                    | 28                           | 8.8                         | 9.0   | 7                                  | 0                                    | 115  |
| Denver, Colo.....                    | 76                           | 14.6                        | 12.5  | 10                                 | 3                                    | .....  |
| Des Moines, Iowa.....                | 22                           | 8.1                         | .....   | 6                                  | .....                                | .....  |
| Detroit, Mich.....                   | 257                          | 13.5                        | 10.0  | 45                                 | 41                                   | 90   |
| Duluth, Minn.....                    | 13                           | 6.4                         | .....   | 4                                  | .....                                | 91   |
| Erie, Pa.....                        | 21                           | 9.7                         | 10.9  | 2                                  | 1                                    | 41   |
| Fall River, Mass. <sup>3</sup> ..... | 18                           | 7.8                         | 11.2  | 1                                  | 4                                    | 14   |
| Flint, Mich.....                     | 20                           | 8.8                         | .....   | 4                                  | .....                                | 79   |
| Fort Worth, Tex.....                 | 12                           | 4.4                         | 10.0  | 1                                  | 2                                    | .....  |
| Grand Rapids, Mich.....              | 27                           | 9.6                         | 12.3  | 6                                  | 2                                    | 95   |
| Houston, Tex.....                    | 19                           | 12.9                        | 10.4  | 7                                  | 4                                    | .....  |
| Indianapolis, Ind.....               | 85                           | 12.9                        | 14.0  | 4                                  | 5                                    | 31   |
| Jacksonville, Fla.....               | 32                           | 16.7                        | 15.0  | 4                                  | 2                                    | .....  |
| Jersey City, N. J.....               | 74                           | 12.5                        | 8.2   | 14                                 | 8                                    | 94   |
| Kansas City, Kans.....               | 15                           | 6.8                         | 11.5  | 2                                  | 2                                    | 46   |
| Kansas City, Mo.....                 | 95                           | 14.1                        | 14.2  | 11                                 | 14                                   | .....  |
| Los Angeles, Calif.....              | 178                          | 13.9                        | 15.4  | 18                                 | 21                                   | 67   |
| Louisville, Ky.....                  | 72                           | 14.6                        | 11.8  | 10                                 | 6                                    | 108  |
| Lowell, Mass.....                    | 32                           | 14.5                        | 11.8  | 9                                  | 3                                    | 156  |
| Lynn, Mass.....                      | 12                           | 6.1                         | .....   | 0                                  | .....                                | 0  |
| Memphis, Tenn.....                   | 67                           | 20.5                        | 16.2  | 4                                  | 9                                    | .....  |
| Milwaukee, Wis.....                  | 87                           | 9.4                         | 7.7   | 13                                 | 14                                   | 65   |
| Minneapolis, Minn.....               | 71                           | 9.0                         | 7.3   | 15                                 | 9                                    | 82   |
| Nashville, Tenn. <sup>3</sup> .....  | 54                           | 23.2                        | 20.4  | 4                                  | 9                                    | .....  |
| New Bedford, Mass.....               | 33                           | 13.2                        | 10.2  | 5                                  | 3                                    | 78   |
| New Haven, Conn.....                 | 32                           | 9.6                         | 8.6   | 7                                  | 3                                    | 91   |
| New Orleans, La.....                 | 125                          | 16.1                        | 17.9  | 17                                 | 14                                   | .....  |
| New York, N. Y.....                  | 1, 213                       | 10.7                        | 9.6   | 145                                | 130                                  | 58   |
| Bronx Borough.....                   | 146                          | 9.1                         | 7.3   | 17                                 | 12                                   | 60   |
| Brooklyn Borough.....                | 402                          | 9.7                         | 8.6   | 43                                 | 30                                   | 45   |
| Manhattan Borough.....               | 520                          | 12.0                        | 11.6  | 67                                 | 70                                   | 65   |
| Queens Borough.....                  | 109                          | 10.6                        | 7.8   | 15                                 | 12                                   | 80   |
| Richmond Borough.....                | 36                           | 14.7                        | 14.3  | 4                                  | 6                                    | 73   |

<sup>1</sup> Annual rate per 1,000 population.

<sup>2</sup> Deaths under 1 year per 1,000 births—an annual rate based on deaths under 1 year for the week and estimated births for 1922. Cities left blank are not in the registration area for births.

<sup>3</sup> Deaths for week ended Friday, June 29, 1923.

Deaths from all causes in certain large cities of the United States during the week ended June 30, 1923, infant mortality, annual death rate, and comparison with corresponding week of 1922—Continued.

| City.                 | Week ended June 30, 1923. |             | Annual death rate per 1,000, corresponding week, 1922. | Deaths under 1 year.      |                           | Infant mortality rate, week ended June 30, 1923. |
|-----------------------|---------------------------|-------------|--|---------------------------|---------------------------|--|
|                       | Total deaths.             | Death rate. |  | Week ended June 30, 1921. | Corresponding week, 1922. |  |
| Newark, N. J.         | 99                        | 11.8        | 8.1  | 11                        | 7                         | 52   |
| Norfolk, Va.          | 50                        | 16.4        | 10.4   | 10                        | 7                         | 176  |
| Oakland, Calif.       | 48                        | 10.4        | 10.5   | 5                         | 5                         | 64   |
| Omaha, Nebr.          | 51                        | 13.0        | 11.7   | 6                         | 3                         | 65   |
| Paterson, N. J.       | 24                        | 9.0         | 11.3   | 6                         | 4                         | 96   |
| Philadelphia, Pa.     | 404                       | 13.4        | 10.5   | 47                        | 45                        | 61   |
| Pittsburgh, Pa.       | 133                       | 11.3        | 11.2   | 17                        | 19                        | 59   |
| Portland, Oreg.       | 54                        | 10.3        | 9.1  | 5                         | 2                         | 51   |
| Providence, R. I.     | 50                        | 10.8        | 11.0   | 6                         | 5                         | 49   |
| Richmond, Va.         | 62                        | 17.9        | 16.1   | 10                        | 6                         | 123  |
| Rochester, N. Y.      | 57                        | 9.4         | 10.0   | 2                         | 12                        | 16   |
| St. Louis, Mo.        | 221                       | 14.3        | 10.6   | 15                        | 13                        | 55   |
| St. Paul, Minn.       | 54                        | 11.6        | 8.7  | 6                         | 3                         | 55   |
| Salt Lake City, Utah* | 23                        | 9.5         | 15.6   | 2                         | 6                         | 33   |
| San Antonio, Tex.     | 50                        | 14.1        |  | 11                        |                           |  |
| San Francisco, Calif. | 139                       | 13.4        | 10.8   | 8                         | 8                         | 48   |
| Seattle, Wash.        | 55                        | 9.1         | 9.4  | 3                         | 4                         | 27   |
| Spokane, Wash.        | 23                        | 11.5        | 12.0   | 3                         | 2                         | 66   |
| Springfield, Mass.    | 17                        | 6.1         | 9.7  | 4                         | 1                         | 57   |
| Syracuse, N. Y.       | 48                        | 13.6        | 10.7   | 1                         | 8                         | 101  |
| Tacoma, Wash.         | 22                        | 11.3        |  | 1                         |                           | 25   |
| Toledo, Ohio.         | 58                        | 11.3        | 8.2  | 5                         | 1                         | 50   |
| Trenton, N. J.        | 54                        | 22.1        | 13.8   | 5                         | 2                         | 85   |
| Utica, N. Y.          | 24                        | 12.1        |  | 1                         |                           | 21   |
| Washington, D. C.     | 100                       | 13.0        | 13.1   | 16                        | 16                        | 91   |
| Wilmington, Del.      | 25                        | 11.1        | 10.8   | 2                         | 3                         | 41   |
| Worcester, Mass.      | 31                        | 8.4         | 10.2   | 7                         | 6                         | 80   |
| Yonkers, N. Y.        | 23                        | 11.2        | 7.9  | 1                         | 4                         | 22   |
| Youngstown, Ohio.     | 28                        | 11.0        | 14.2   | 3                         | 6                         | 41   |

\* Deaths for week ended Friday, June 29, 1923.



# PREVALENCE OF DISEASE.

*No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.*

## UNITED STATES.

### CURRENT STATE SUMMARIES.

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers.

#### Reports for Week Ended July 7, 1923.

| ALABAMA.                  |        | CALIFORNIA—continued.         |        |
|---------------------------|--------|-------------------------------|--------|
|                           | Cases. |                               | Cases. |
| Diphtheria.....           | 16     | Diphtheria.....               | 136    |
| Dysentery.....            | 94     | Influenza.....                | 8      |
| Influenza.....            | 11     | Leprosy—Los Angeles.....      | 1      |
| Malaria.....              | 208    | Lethargic encephalitis.....   | 2      |
| Measles.....              | 118    | Measles.....                  | 550    |
| Mumps.....                | 3      | Poliomyelitis:                |        |
| Pellagra.....             | 11     | Chino.....                    | 1      |
| Pneumonia.....            | 27     | Los Angeles County.....       | 1      |
| Scarlet fever.....        | 4      | Scarlet fever.....            | 82     |
| Tuberculosis.....         | 37     | Smallpox.....                 | 21     |
| Typhoid fever.....        | 76     | Typhoid fever.....            | 10     |
| Whooping cough.....       | 60     |                               |        |
| ARIZONA.                  |        | COLORADO.                     |        |
|                           |        | (Exclusive of Denver.)        |        |
| Diphtheria.....           | 4      | Cerebrospinal meningitis..... | 2      |
| Measles.....              | 1      | Chicken pox.....              | 5      |
| Scarlet fever.....        | 3      | Diphtheria.....               | 5      |
| Tuberculosis.....         | 9      | Measles.....                  | 111    |
| Typhoid fever.....        | 1      | Mumps.....                    | 3      |
| ARKANSAS.                 |        | Pneumonia.....                | 1      |
| Chicken pox.....          | 11     | Scarlet fever.....            | 2      |
| Diphtheria.....           | 2      | Smallpox.....                 | 1      |
| Hookworm disease.....     | 1      | Tuberculosis.....             | 14     |
| Influenza.....            | 3      | Typhoid fever.....            | 4      |
| Malaria.....              | 146    | Whooping cough.....           | 8      |
| Measles.....              | 92     |                               |        |
| Mumps.....                | 6      | CONNECTICUT.                  |        |
| Paratyphoid fever.....    | 2      | Cerebrospinal meningitis..... | 2      |
| Pellagra.....             | 29     | Chicken pox.....              | 30     |
| Smallpox.....             | 10     | Diphtheria.....               | 30     |
| Tuberculosis.....         | 13     | German measles.....           | 3      |
| Typhoid fever.....        | 14     | Lethargic encephalitis.....   | 1      |
| Whooping cough.....       | 48     | Malaria.....                  | 2      |
| CALIFORNIA.               |        | Measles.....                  | 63     |
| Cerebrospinal meningitis: |        | Mumps.....                    | 11     |
| Fresno.....               | 1      | Pneumonia (lobar).....        | 7      |
| Los Angeles.....          | 1      | Poliomyelitis.....            | 2      |
| Orange County.....        | 1      | Scarlet fever.....            | 23     |
| Sacramento.....           | 1      | Tetanus.....                  | 2      |

## CONNECTICUT—continued.

|                               | Cases. |
|-------------------------------|--------|
| Tuberculosis (all forms)..... | 15     |
| Typhoid fever.....            | 5      |
| Whooping cough.....           | 54     |

## FLORIDA.

|                            |    |
|----------------------------|----|
| Dengue.....                | 2  |
| Diphtheria.....            | 9  |
| Malaria.....               | 16 |
| Ophthalmia neonatorum..... | 1  |
| Pneumonia.....             | 1  |
| Scarlet fever.....         | 2  |
| Smallpox.....              | 4  |
| Typhoid fever.....         | 8  |

## GEORGIA.

|                               |    |
|-------------------------------|----|
| Cerebrospinal meningitis..... | 2  |
| Diphtheria.....               | 9  |
| Dysentery (amebic).....       | 1  |
| Dysentery (bacillary).....    | 13 |
| German measles.....           | 1  |
| Hookworm disease.....         | 18 |
| Influenza.....                | 7  |
| Malaria.....                  | 33 |
| Measles.....                  | 76 |
| Mumps.....                    | 10 |
| Paratyphoid fever.....        | 2  |
| Pellagra.....                 | 5  |
| Pneumonia.....                | 31 |
| Scarlet fever.....            | 4  |
| Septic sore throat.....       | 2  |
| Smallpox.....                 | 19 |
| Trachoma.....                 | 5  |
| Tuberculosis (pulmonary)..... | 16 |
| Typhoid fever.....            | 33 |
| Whooping cough.....           | 19 |

## ILLINOIS.

|                                       |     |
|---------------------------------------|-----|
| Cerebrospinal meningitis—Chicago..... | 2   |
| Diphtheria:                           |     |
| Cook County (including Chicago).....  | 67  |
| Chicago.....                          | 61  |
| Scattering.....                       | 22  |
| Influenza:                            |     |
| Chicago.....                          | 4   |
| Scattering.....                       | 4   |
| Lethargic encephalitis—Chicago.....   | 1   |
| Pneumonia.....                        | 90  |
| Scarlet fever:                        |     |
| Cook County (including Chicago).....  | 60  |
| Chicago.....                          | 55  |
| Scattering.....                       | 19  |
| Smallpox:                             |     |
| Chicago.....                          | 7   |
| Scattering.....                       | 3   |
| Typhoid fever:                        |     |
| Chicago.....                          | 3   |
| Scattering.....                       | 13  |
| Whooping cough.....                   | 231 |

## INDIANA.

|                        |     |
|------------------------|-----|
| Diphtheria.....        | 21  |
| Measles.....           | 262 |
| Pneumonia.....         | 1   |
| Rabies in animals..... | 1   |
| Scarlet fever.....     | 33  |

## INDIANA—continued.

|                    | Cases. |
|--------------------|--------|
| Smallpox.....      | 22     |
| Tuberculosis.....  | 81     |
| Typhoid fever..... | 5      |

## IOWA.

|                    |    |
|--------------------|----|
| Diphtheria.....    | 15 |
| Scarlet fever..... | 19 |
| Smallpox.....      | 10 |

## KANSAS.

|                     |     |
|---------------------|-----|
| Actinomycosis.....  | 1   |
| Chicken pox.....    | 12  |
| Diphtheria.....     | 25  |
| Measles.....        | 176 |
| Mumps.....          | 14  |
| Pneumonia.....      | 3   |
| Scarlet fever.....  | 15  |
| Smallpox.....       | 8   |
| Tuberculosis.....   | 29  |
| Typhoid fever.....  | 8   |
| Whooping cough..... | 108 |

## LOUISIANA.

|                               |    |
|-------------------------------|----|
| Cerebrospinal meningitis..... | 2  |
| Diphtheria.....               | 9  |
| Influenza.....                | 1  |
| Lethargic encephalitis.....   | 1  |
| Measles.....                  | 77 |
| Poliomyelitis.....            | 1  |
| Smallpox.....                 | 5  |
| Typhoid fever.....            | 20 |
| Whooping cough.....           | 23 |

## MAINE.

|                            |    |
|----------------------------|----|
| Chicken pox.....           | 11 |
| Diphtheria.....            | 5  |
| German measles.....        | 11 |
| Measles.....               | 60 |
| Ophthalmia neonatorum..... | 1  |
| Pneumonia.....             | 1  |
| Scarlet fever.....         | 11 |
| Tuberculosis.....          | 4  |
| Whooping cough.....        | 48 |

MARYLAND.<sup>1</sup>

|                               |     |
|-------------------------------|-----|
| Cerebrospinal meningitis..... | 1   |
| Chicken pox.....              | 23  |
| Diphtheria.....               | 23  |
| Dysentery.....                | 10  |
| German measles.....           | 5   |
| Lethargic encephalitis.....   | 2   |
| Malaria.....                  | 12  |
| Measles.....                  | 220 |
| Mumps.....                    | 10  |
| Paratyphoid fever.....        | 2   |
| Pneumonia (all forms).....    | 27  |
| Scarlet fever.....            | 38  |
| Septic sore throat.....       | 1   |
| Tuberculosis.....             | 40  |
| Typhoid fever.....            | 18  |
| Whooping cough.....           | 97  |

## MASSACHUSETTS.

|                                   |     |
|-----------------------------------|-----|
| Cerebrospinal meningitis.....     | 1   |
| Chicken pox.....                  | 146 |
| Conjunctivitis (suppurative)..... | 9   |

<sup>1</sup> Week ended Friday.



| MASSACHUSETTS—continued.      |        | NEBRASKA—continued.           |        |
|-------------------------------|--------|-------------------------------|--------|
|                               | Cases. |                               | Cases. |
| Diphtheria.....               | 99     | Poliomyelitis.....            | 1      |
| German measles.....           | 4      | Scarlet fever.....            | 8      |
| Lethargic encephalitis.....   | 1      | Smallpox.....                 | 1      |
| Measles.....                  | 358    | Whooping cough.....           | 12     |
| Mumps.....                    | 61     |                               |        |
| Ophthalmia neonatorum.....    | 16     | NEW JERSEY.                   |        |
| Pneumonia (lobar).....        | 28     | Cerebrospinal meningitis..... | 2      |
| Scarlet fever.....            | 119    | Chicken pox.....              | 100    |
| Trachoma.....                 | 2      | Diphtheria.....               | 79     |
| Tuberculosis (all forms)..... | 125    | Malaria.....                  | 11     |
| Typhoid fever.....            | 14     | Measles.....                  | 283    |
| Whooping cough.....           | 105    | Pneumonia.....                | 26     |
|                               |        | Poliomyelitis.....            | 1      |
| MICHIGAN.                     |        | Scarlet fever.....            | 36     |
| Diphtheria.....               | 78     | Smallpox.....                 | 11     |
| Measles.....                  | 760    | Typhoid fever.....            | 9      |
| Pneumonia.....                | 38     | Whooping cough.....           | 92     |
| Scarlet fever.....            | 85     |                               |        |
| Smallpox.....                 | 18     | NEW YORK.                     |        |
| Tuberculosis.....             | 34     | (Exclusive of New York City.) |        |
| Typhoid fever.....            | 14     | Diphtheria.....               | 109    |
| Whooping cough.....           | 130    | Influenza.....                | 3      |
|                               |        | Lethargic encephalitis.....   | 4      |
| MINNESOTA.                    |        | Measles.....                  | 1,760  |
| Chicken pox.....              | 2      | Poliomyelitis.....            | 5      |
| Diphtheria.....               | 34     | Scarlet fever.....            | 118    |
| Lethargic encephalitis.....   | 1      | Smallpox.....                 | 17     |
| Measles.....                  | 74     | Typhoid fever.....            | 21     |
| Scarlet fever.....            | 81     | Whooping cough.....           | 180    |
| Smallpox.....                 | 7      |                               |        |
| Tuberculosis.....             | 45     | NORTH CAROLINA.               |        |
| Typhoid fever.....            | 2      | Cerebrospinal meningitis..... | 1      |
| Whooping cough.....           | 2      | Chicken pox.....              | 25     |
|                               |        | Diphtheria.....               | 19     |
| MISSISSIPPI.                  |        | Measles.....                  | 729    |
| Diphtheria.....               | 4      | Scarlet fever.....            | 7      |
| Influenza.....                | 12     | Septic sore throat.....       | 1      |
| Poliomyelitis.....            | 1      | Smallpox.....                 | 30     |
| Scarlet fever.....            | 1      | Typhoid fever.....            | 52     |
| Smallpox.....                 | 3      | Whooping cough.....           | 323    |
| Typhoid fever.....            | 25     |                               |        |
|                               |        | OREGON.                       |        |
| MISSOURI.                     |        | Chicken pox.....              | 10     |
| Cerebrospinal meningitis..... | 1      | Diphtheria.....               | 11     |
| Chicken pox.....              | 5      | Measles.....                  | 8      |
| Diphtheria.....               | 22     | Mumps.....                    | 3      |
| Influenza.....                | 1      | Scarlet fever.....            | 9      |
| Measles.....                  | 142    | Smallpox:                     |        |
| Mumps.....                    | 8      | Portland.....                 | 11     |
| Ophthalmia neonatorum.....    | 1      | Scattering.....               | 5      |
| Pneumonia.....                | 2      | Typhoid fever.....            | 2      |
| Scarlet fever.....            | 16     | Whooping cough.....           | 5      |
| Septic sore throat.....       | 2      |                               |        |
| Trachoma.....                 | 4      | SOUTH DAKOTA.                 |        |
| Tuberculosis.....             | 36     | Chicken pox.....              | 8      |
| Typhoid fever.....            | 16     | Diphtheria.....               | 5      |
| Whooping cough.....           | 185    | Measles.....                  | 51     |
|                               |        | Scarlet fever.....            | 8      |
| MONTANA.                      |        |                               |        |
| Diphtheria.....               | 1      | TEXAS.                        |        |
| Scarlet fever.....            | 23     | Chicken pox.....              | 6      |
| Smallpox.....                 | 12     | Dengue.....                   | 1      |
|                               |        | Diphtheria.....               | 19     |
| NEBRASKA.                     |        | Dysentery (epidemic).....     | 6      |
| Chicken pox.....              | 1      | Influenza.....                | 17     |
| Diphtheria.....               | 6      | Measles.....                  | 67     |
| German measles.....           | 1      | Mumps.....                    | 16     |
| Measles.....                  | 6      | Pellagra.....                 | 3      |
| Mumps.....                    | 9      |                               |        |

| TEXAS—continued.            |        | WISCONSIN.                        |        |
|-----------------------------|--------|-----------------------------------|--------|
|                             | Cases. | Milwaukee:                        | Cases. |
| Pneumonia.....              | 10     | Cerebrospinal meningitis.....     | 1      |
| Polioomyelitis.....         | 1      | Chicken pox.....                  | 10     |
| Scarlet fever.....          | 8      | Diphtheria.....                   | 13     |
| Smallpox.....               | 43     | German measles.....               | 1      |
| Trachoma.....               | 5      | Measles.....                      | 12     |
| Tuberculosis.....           | 37     | Scarlet fever.....                | 29     |
| Typhoid fever.....          | 24     | Smallpox.....                     | 1      |
| Whooping cough.....         | 52     | Tuberculosis.....                 | 14     |
|                             |        | Whooping cough.....               | 21     |
| WASHINGTON.                 |        | Scattering:                       |        |
| Chicken pox.....            | 41     | Chicken pox.....                  | 47     |
| Diphtheria.....             | 15     | Diphtheria.....                   | 27     |
| Lethargic encephalitis..... | 2      | German measles.....               | 1      |
| Measles.....                | 77     | Influenza.....                    | 2      |
| Mumps.....                  | 17     | Lethargic encephalitis.....       | 1      |
| Pneumonia.....              | 2      | Measles.....                      | 474    |
| Scarlet fever.....          | 21     | Pneumonia.....                    | 1      |
| Smallpox:                   |        | Scarlet fever.....                | 84     |
| Clarke County.....          | 14     | Smallpox.....                     | 10     |
| Scattering.....             | 22     | Tuberculosis.....                 | 25     |
| Tuberculosis.....           | 16     | Typhoid fever.....                | 9      |
| Typhoid fever.....          | 1      | Whooping cough.....               | 70     |
| Whooping cough.....         | 72     |                                   |        |
| WEST VIRGINIA.              |        | WYOMING.                          |        |
| Diphtheria.....             | 5      | Diphtheria.....                   | 1      |
| Smallpox.....               | 1      | Measles.....                      | 11     |
| Typhoid fever.....          | 12     | Rocky Mountain spotted fever..... | 1      |
|                             |        | Scarlet fever.....                | 4      |

## Report for Week Ended June 30, 1923.

| DISTRICT OF COLUMBIA. |        | DISTRICT OF COLUMBIA—continued. |        |
|-----------------------|--------|---------------------------------|--------|
|                       | Cases. |                                 | Cases. |
| Chicken pox.....      | 13     | Tuberculosis.....               | 19     |
| Diphtheria.....       | 3      | Typhoid fever.....              | 2      |
| Measles.....          | 47     | Whooping cough.....             | 13     |
| Scarlet fever.....    | 8      |                                 |        |

## SUMMARY OF CASES REPORTED MONTHLY BY STATES.

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week:

| State.              | Cerebrospinal meningitis. | Diphtheria. | Influenza. | Malaria. | Measles. | Pollagra. | Polioomyelitis. | Scarlet fever. | Smallpox. | Typhoid fever. |
|---------------------|---------------------------|-------------|------------|----------|----------|-----------|-----------------|----------------|-----------|----------------|
| <i>April, 1923.</i> |                           |             |            |          |          |           |                 |                |           |                |
| Wyoming.....        |                           | 3           |            |          | 90       |           | 1               | 21             | 1         | 1              |
| <i>May, 1923.</i>   |                           |             |            |          |          |           |                 |                |           |                |
| Alabama.....        |                           | 69          | 350        | 482      | 6,841    | 96        | 1               | 28             | 57        | 117            |
| Ohio.....           | 4                         | 500         | 29         |          | 11,008   |           | 3               | 1,534          | 313       | 59             |
| Wyoming.....        |                           | 6           | 1          |          | 47       |           | 1               | 34             | 1         | 3              |
| <i>June, 1923.</i>  |                           |             |            |          |          |           |                 |                |           |                |
| Connecticut.....    | 5                         | 136         | 2          | 10       | 556      |           |                 | 230            | 3         | 9              |

## CITY REPORTS FOR WEEK ENDED JUNE 23, 1923.

## ANTHRAX.

| City.         | Cases. | Deaths. |
|---------------|--------|---------|
| New York:     |        |         |
| New York..... | 1      | .....   |
| Texas:        |        |         |
| Houston.....  | 1      | .....   |

## CEREBROSPINAL MENINGITIS.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding week of the years 1915 to 1922, inclusive. In instances in which data for the full eight years are incomplete, the median is that for the number of years for which information is available.

| City.          | Median for previous years. | Week ended June 23, 1923. |         | City.              | Median for previous years. | Week ended June 23, 1923. |         |
|----------------|----------------------------|---------------------------|---------|--------------------|----------------------------|---------------------------|---------|
|                |                            | Cases.                    | Deaths. |                    |                            | Cases.                    | Deaths. |
| Illinois:      |                            |                           |         | New York:          |                            |                           |         |
| Chicago.....   | 2                          | 1                         | 1       | Lackawanna.....    | 0                          | .....                     | 1       |
| Indiana:       |                            |                           |         | New York.....      | 4                          | 1                         | 1       |
| Muncie.....    | 0                          | 1                         | 1       | Niagara Falls..... | 0                          | 1                         | 1       |
| Maine:         |                            |                           |         | Troy.....          | 0                          | 1                         | 1       |
| Biddeford..... | 0                          | .....                     | 1       | Rhode Island:      |                            |                           |         |
| Massachusetts: |                            |                           |         | Providence.....    | 0                          | .....                     | 1       |
| Boston.....    | 0                          | 1                         | 1       | Texas:             |                            |                           |         |
| Michigan:      |                            |                           |         | Dallas.....        | 0                          | 1                         | 1       |
| Kalamazoo..... | 0                          | 1                         | .....   | Virginia:          |                            |                           |         |
| Missouri:      |                            |                           |         | Norfolk.....       | 0                          | .....                     | 1       |
| St. Louis..... | 0                          | 1                         | 1       | Wisconsin:         |                            |                           |         |
| New Jersey:    |                            |                           |         | Milwaukee.....     | 1                          | 1                         | 2       |
| Montclair..... | 0                          | 1                         | 1       |                    |                            |                           |         |
| Newark.....    | 0                          | .....                     | 1       |                    |                            |                           |         |

## DIPHTHERIA.

See p. 1595; also Current State summaries, p. 1585, and Monthly summaries by States, p. 1588.

## INFLUENZA.

| City.              | Cases.                    |                           | Deaths, week ended June 23, 1923. | City.             | Cases.                    |                           | Deaths, week ended June 23, 1923. |
|--------------------|---------------------------|---------------------------|-----------------------------------|-------------------|---------------------------|---------------------------|-----------------------------------|
|                    | Week ended June 24, 1922. | Week ended June 23, 1923. |                                   |                   | Week ended June 24, 1922. | Week ended June 23, 1923. |                                   |
| Alabama:           |                           |                           |                                   | Massachusetts:    |                           |                           |                                   |
| Birmingham.....    |                           | 2                         | .....                             | Boston.....       | 2                         | .....                     | .....                             |
| California:        |                           |                           |                                   | Danvers.....      |                           | 1                         | .....                             |
| Los Angeles.....   | 2                         | 10                        | 1                                 | Holyoke.....      | 1                         | .....                     | .....                             |
| Oakland.....       |                           |                           | 1                                 | Springfield.....  |                           | 3                         | 3                                 |
| San Diego.....     |                           |                           | 1                                 | Minnesota:        |                           |                           |                                   |
| San Francisco..... |                           | 2                         | .....                             | St. Paul.....     |                           |                           | 2                                 |
| Connecticut:       |                           |                           |                                   | Missouri:         |                           |                           |                                   |
| Meriden.....       | 5                         | .....                     | .....                             | Kansas City.....  |                           | 2                         | 2                                 |
| Florida:           |                           |                           |                                   | New Jersey:       |                           |                           |                                   |
| Tampa.....         | 11                        | .....                     | .....                             | Newark.....       | 2                         | .....                     | .....                             |
| Georgia:           |                           |                           |                                   | Passaic.....      | 1                         | .....                     | .....                             |
| Savannah.....      |                           | 1                         | .....                             | New York:         |                           |                           |                                   |
| Illinois:          |                           |                           |                                   | New York.....     | 9                         | 3                         | 1                                 |
| Chicago.....       | 5                         | 4                         | 1                                 | North Carolina:   |                           |                           |                                   |
| Rock Island.....   | 1                         | .....                     | .....                             | Greensboro.....   |                           |                           | 1                                 |
| Louisiana:         |                           |                           |                                   | Ohio:             |                           |                           |                                   |
| New Orleans.....   |                           | 1                         | 1                                 | Cleveland.....    |                           | 1                         | .....                             |
| Maryland:          |                           |                           |                                   | Pennsylvania:     |                           |                           |                                   |
| Cumberland.....    | 1                         | .....                     | .....                             | Philadelphia..... | 1                         | .....                     | .....                             |
| Frederick.....     |                           | 2                         | .....                             | Texas:            |                           |                           |                                   |
|                    |                           |                           |                                   | Fort Worth.....   | 1                         | 1                         | 1                                 |

## CITY REPORTS FOR WEEK ENDED JUNE 23, 1923—Continued.

## LEPROSY.

| City.        | Cases. | Deaths. |
|--------------|--------|---------|
| Texas:       |        |         |
| Houston..... | 1      | .....   |

## LETHARGIC ENCEPHALITIS.

|                |       |       |
|----------------|-------|-------|
| Texas:         |       |       |
| Galveston..... | ..... | 1     |
| Wisconsin:     |       |       |
| Milwaukee..... | 1     | ..... |

## MALARIA.

| City.            | Cases. | Deaths. | City.             | Cases. | Deaths. |
|------------------|--------|---------|-------------------|--------|---------|
| Alabama:         |        |         | New Jersey:       |        |         |
| Birmingham.....  | 3      | .....   | Paterson.....     | 2      | .....   |
| Mobile.....      | 2      | .....   | New York:         |        |         |
| Montgomery.....  | 1      | .....   | New York.....     | 1      | .....   |
| Arkansas:        |        |         | Ohio:             |        |         |
| Little Rock..... | 4      | .....   | Akron.....        | 1      | .....   |
| Connecticut:     |        |         | Cleveland.....    | 1      | .....   |
| New Britain..... | 1      | .....   | Pennsylvania:     |        |         |
| New London.....  | 1      | .....   | Philadelphia..... | 1      | .....   |
| Georgia:         |        |         | Tennessee:        |        |         |
| Rome.....        | 1      | .....   | Memphis.....      | 3      | .....   |
| Savannah.....    | 4      | .....   | Texas:            |        |         |
| Illinois:        |        |         | Austin.....       | 1      | .....   |
| Chicago.....     | 1      | .....   | Dallas.....       | .....  | 1       |
| Louisiana:       |        |         | Virginia:         |        |         |
| New Orleans..... | 1      | .....   | Richmond.....     | 1      | .....   |
| Maryland:        |        |         |                   |        |         |
| Baltimore.....   | 2      | .....   |                   |        |         |

## MEASLES.

See p. 1595; also Current State summaries, p. 1585, and Monthly summaries by States, p. 1588.

## PELLAGRA.

| City.            | Cases. | Deaths. | City.           | Cases. | Deaths. |
|------------------|--------|---------|-----------------|--------|---------|
| Alabama:         |        |         | Tennessee:      |        |         |
| Birmingham.....  | .....  | 1       | Memphis.....    | 1      | .....   |
| California:      |        |         | Nashville.....  | 1      | .....   |
| Oakland.....     | 1      | .....   | Texas:          |        |         |
| Louisiana:       |        |         | Dallas.....     | .....  | 1       |
| New Orleans..... | 1      | .....   | Fort Worth..... | 1      | 1       |
| North Carolina:  |        |         | Virginia:       |        |         |
| Greensboro.....  | .....  | 1       | Norfolk.....    | .....  | 1       |
| South Carolina:  |        |         | Roanoke.....    | .....  | 1       |
| Charleston.....  | .....  | 1       |                 |        |         |
| Columbia.....    | .....  | 1       |                 |        |         |

## PNEUMONIA (ALL FORMS).

|                     |       |       |                       |       |       |
|---------------------|-------|-------|-----------------------|-------|-------|
| Alabama:            |       |       | California—Continued. |       |       |
| Birmingham.....     | 6     | 4     | San Diego.....        | 2     | 1     |
| Mobile.....         | ..... | 1     | San Francisco.....    | 12    | 5     |
| Montgomery.....     | 1     | ..... | Stockton.....         | 1     | ..... |
| California:         |       |       | Colorado:             |       |       |
| Alameda.....        | ..... | 1     | Denver.....           | ..... | 2     |
| Los Angeles.....    | 18    | 12    | Pueblo.....           | ..... | 1     |
| Oakland.....        | ..... | 2     | Connecticut:          |       |       |
| Riverside.....      | ..... | 1     | Bridgeport.....       | 3     | ..... |
| Sacramento.....     | 6     | ..... | Hartford.....         | 2     | 1     |
| San Bernardino..... | ..... | 2     | Meriden.....          | 1     | ..... |

## CITY REPORTS FOR WEEK ENDED JUNE 23, 1923—Continued.

## PNEUMONIA (ALL FORMS)—Continued.

| City.                  | Cases. | Deaths. | City.                | Cases. | Deaths. |
|------------------------|--------|---------|----------------------|--------|---------|
| Connecticut—Continued. |        |         | Missouri:            |        |         |
| New Britain.....       |        | 1       | Kansas City.....     |        | 4       |
| New Haven.....         |        | 1       | St. Joseph.....      |        | 1       |
| District of Columbia:  |        |         | Montana:             |        |         |
| Washington.....        |        | 11      | Billings.....        |        | 1       |
| Florida:               |        |         | Nebraska:            |        |         |
| Tampa.....             | 1      |         | Omaha.....           |        | 3       |
| Georgia:               |        |         | New Hampshire:       |        |         |
| Atlanta.....           | 2      | 1       | Concord.....         |        | 1       |
| Rome.....              | 1      |         | Manchester.....      |        | 2       |
| Savannah.....          |        | 2       | New Jersey:          |        |         |
| Illinois:              |        |         | Atlantic City.....   |        | 1       |
| Aurora.....            |        | 2       | Clifton.....         | 2      |         |
| Chicago.....           | 95     | 31      | Elizabeth.....       |        | 3       |
| Cicero.....            |        | 1       | Garfield.....        | 3      |         |
| Decatur.....           |        | 1       | Hoboken.....         |        | 1       |
| East St. Louis.....    |        | 1       | Morristown.....      | 1      |         |
| Elgin.....             | 2      |         | Newark.....          | 17     | 4       |
| Jacksonville.....      | 4      | 2       | Orange.....          | 2      |         |
| Kewanee.....           |        | 1       | Passaic.....         | 1      |         |
| Mattoon.....           | 2      |         | Paterson.....        | 1      |         |
| Quincy.....            | 1      |         | Plainfield.....      |        | 1       |
| Springfield.....       |        | 2       | Trenton.....         |        | 2       |
| Indiana:               |        |         | West Orange.....     | 2      |         |
| Anderson.....          |        | 4       | New York:            |        |         |
| Fort Wayne.....        |        | 1       | Albany.....          | 8      |         |
| Hammond.....           |        | 1       | Amsterdam.....       |        | 1       |
| Indianapolis.....      |        | 4       | Buffalo.....         | 10     | 8       |
| Muncie.....            |        | 1       | Cortland.....        | 1      |         |
| South Bend.....        |        | 1       | Glens Falls.....     |        | 1       |
| Kansas:                |        |         | Ithaca.....          | 1      |         |
| Hutchinson.....        | 1      |         | Lackawanna.....      | 6      | 2       |
| Topeka.....            | 1      |         | Mount Vernon.....    | 2      | 1       |
| Kentucky:              |        |         | New York.....        | 93     | 88      |
| Lexington.....         |        | 1       | Newburgh.....        | 1      |         |
| Louisville.....        |        | 6       | Niagara Falls.....   | 3      | 1       |
| Louisiana:             |        |         | North Tonawanda..... |        | 1       |
| New Orleans.....       |        | 9       | Rochester.....       | 10     | 2       |
| Maine:                 |        |         | Schenectady.....     | 6      |         |
| Auburn.....            | 1      |         | Syracuse.....        | 10     | 2       |
| Biddeford.....         |        | 2       | Troy.....            |        | 2       |
| Portland.....          |        | 2       | Watertown.....       |        | 2       |
| Maryland:              |        |         | White Plains.....    | 1      |         |
| Baltimore.....         | 21     | 20      | North Carolina:      |        |         |
| Massachusetts:         |        |         | Durham.....          |        | 1       |
| Adams.....             |        | 1       | Wilmington.....      |        | 1       |
| Arlington.....         |        | 1       | Winston-Salem.....   |        | 2       |
| Belmont.....           |        | 1       | Ohio:                |        |         |
| Boston.....            |        | 13      | Akron.....           | 1      |         |
| Cambridge.....         |        | 1       | Barberton.....       | 2      |         |
| Chelsea.....           |        | 2       | Cincinnati.....      |        | 5       |
| Chicopee.....          |        | 1       | Cleveland.....       | 10     | 12      |
| Fall River.....        |        | 2       | Columbus.....        |        | 4       |
| Haverhill.....         | 1      |         | Dayton.....          | 2      |         |
| Lawrence.....          |        | 1       | Lorain.....          | 1      |         |
| Lowell.....            |        | 1       | Newark.....          |        | 3       |
| New Bedford.....       |        | 4       | Springfield.....     |        | 1       |
| North Adams.....       | 1      |         | Toledo.....          |        | 3       |
| Pittsfield.....        |        | 2       | Youngstown.....      |        | 2       |
| Plymouth.....          |        | 3       | Oregon:              |        |         |
| Quincy.....            |        | 1       | Portland.....        |        | 4       |
| Taunton.....           |        | 1       | Pennsylvania:        |        |         |
| Watertown.....         |        | 1       | Philadelphia.....    | 35     | 25      |
| Worcester.....         |        | 3       | Pittsburgh.....      |        | 24      |
| Michigan:              |        |         | Rhode Island:        |        |         |
| Battle Creek.....      | 1      |         | Cranston.....        |        | 1       |
| Benton Harbor.....     |        | 1       | Pawtucket.....       |        | 1       |
| Detroit.....           | 35     | 19      | Providence.....      |        | 3       |
| Flint.....             |        | 2       | South Carolina:      |        |         |
| Grand Rapids.....      | 2      |         | Charleston.....      |        | 2       |
| Highland Park.....     | 6      | 2       | South Dakota:        |        |         |
| Jackson.....           |        | 1       | Sioux Falls.....     |        | 1       |
| Kalamazoo.....         |        | 1       | Tennessee:           |        |         |
| Muskegon.....          | 1      |         | Memphis.....         |        | 6       |
| Port Huron.....        | 2      | 1       | Nashville.....       |        | 1       |
| Minnesota:             |        |         | Texas:               |        |         |
| Duluth.....            | 2      | 1       | Dallas.....          |        | 1       |
| Minneapolis.....       |        | 1       | El Paso.....         |        | 1       |
| St. Paul.....          |        | 2       | Fort Worth.....      |        | 1       |

## CITY REPORTS FOR WEEK ENDED JUNE 23, 1923—Continued.

## PNEUMONIA (ALL FORMS)—Continued.

| City.               | Cases. | Deaths. | City.            | Cases. | Deaths. |
|---------------------|--------|---------|------------------|--------|---------|
| Texas—Continued.    |        |         | West Virginia:   |        |         |
| Houston.....        |        | 3       | Bluefield.....   |        | 1       |
| San Angelo.....     |        | 1       | Parkersburg..... |        | 1       |
| San Antonio.....    |        | 2       | Wheeling.....    |        | 1       |
| Utah:               |        |         | Wisconsin:       |        |         |
| Provo.....          |        | 1       | Milwaukee.....   | 4      |         |
| Salt Lake City..... |        | 3       | Sheboygan.....   |        | 1       |
| Virginia:           |        |         | Superior.....    |        | 1       |
| Norfolk.....        |        | 3       | Wyoming:         |        |         |
| Petersburg.....     |        | 2       | Cheyenne.....    |        | 1       |
| Richmond.....       |        | 3       |                  |        |         |

## POLIOMYELITIS (INFANTILE PARALYSIS).

The column headed "Median for previous years" gives the median number of cases reported during the corresponding week of the years 1915 to 1922, inclusive. In instances in which data for the full eight years are incomplete, the median is that for the number of years for which information is available.

| City.          | Median<br>for pre-<br>vious<br>years. | Week ended<br>June 23, 1923 |         |
|----------------|---------------------------------------|-----------------------------|---------|
|                |                                       | Cases.                      | Deaths. |
| California:    |                                       |                             |         |
| San Diego..... | 0                                     | 1                           | 1       |
| New York:      |                                       |                             |         |
| New York.....  | 2                                     | 5                           |         |
| Oklahoma:      |                                       |                             |         |
| Oklahoma.....  | 0                                     | 1                           |         |

## RABIES IN ANIMALS.

| City.            | Cases. | City.         | Cases. |
|------------------|--------|---------------|--------|
| California:      |        | Tennessee:    |        |
| Los Angeles..... | 14     | Memphis.....  | 1      |
| Georgia:         |        | Texas:        |        |
| Savannah.....    | 1      | Beaumont..... | 1      |
| Missouri:        |        |               |        |
| Kansas City..... | 1      |               |        |

## RABIES IN MAN.

| City.        | Cases. | Deaths. |
|--------------|--------|---------|
| Texas:       |        |         |
| Houston..... | 1      | 1       |

## SCARLET FEVER.

See p. 1595; also Current State summaries, p. 1585, and Monthly summaries by States, p. 1588.

## CITY REPORTS FOR WEEK ENDED JUNE 23, 1923—Continued.

## SMALLPOX.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding week of the years 1915 to 1922, inclusive. In instances in which data for the full eight years are incomplete, the median is that for the number of years for which information is available.

| City.              | Median for previous years. | Week ended June 23, 1923. |         | City.              | Median for previous years. | Week ended June 23, 1923. |         |
|--------------------|----------------------------|---------------------------|---------|--------------------|----------------------------|---------------------------|---------|
|                    |                            | Cases.                    | Deaths. |                    |                            | Cases.                    | Deaths. |
| California:        |                            |                           |         | Ohio:              |                            |                           |         |
| Los Angeles.....   | 0                          | 7                         |         | Chillicothe.....   | 0                          | 3                         |         |
| Georgia:           |                            |                           |         | Columbus.....      | 0                          | 1                         |         |
| Atlanta.....       | 6                          | 27                        |         | Dayton.....        | 0                          | 1                         |         |
| Illinois:          |                            |                           |         | Martins Ferry..... | 0                          | 1                         |         |
| Chicago.....       | 1                          | 5                         |         | Sandusky.....      | 0                          | 4                         |         |
| Indiana:           |                            |                           |         | Toledo.....        | 1                          | 2                         |         |
| Fort Wayne.....    | 1                          | 5                         |         | Oklahoma:          |                            |                           |         |
| Huntington.....    | 0                          | 1                         |         | Oklahoma.....      | 6                          | 4                         |         |
| Indianapolis.....  | 4                          | 6                         |         | Tulsa.....         | 0                          | 6                         |         |
| La Fayette.....    | 0                          | 1                         |         | Oregon:            |                            |                           |         |
| Muncie.....        | 0                          | 4                         |         | Portland.....      | 6                          | 10                        |         |
| South Bend.....    | 0                          | 3                         |         | Pennsylvania:      |                            |                           |         |
| Iowa:              |                            |                           |         | Sharon.....        | 0                          | 2                         |         |
| Burlington.....    | 0                          | 1                         |         | South Carolina:    |                            |                           |         |
| Cedar Rapids.....  | 1                          | 2                         |         | Greenville.....    | 1                          | 1                         |         |
| Davenport.....     | 1                          | 6                         |         | Tennessee:         |                            |                           |         |
| Sioux City.....    | 3                          | 1                         |         | Chattanooga.....   | 0                          | 6                         |         |
| Michigan:          |                            |                           |         | Knoxville.....     | 0                          | 7                         |         |
| Detroit.....       | 12                         | 3                         |         | Texas:             |                            |                           |         |
| Grand Rapids.....  | 0                          | 1                         |         | San Antonio.....   |                            | 1                         | 1       |
| Jackson.....       | 0                          | 3                         |         | Vermont:           |                            |                           |         |
| Muskegon.....      | 0                          | 1                         |         | Burlington.....    | 0                          | 2                         |         |
| Minnesota:         |                            |                           |         | Virginia:          |                            |                           |         |
| Duluth.....        | 3                          | 2                         |         | Lynchburg.....     | 0                          | 1                         |         |
| Missouri:          |                            |                           |         | Roanoke.....       | 0                          | 3                         |         |
| St. Louis.....     | 1                          | 1                         |         | Washington:        |                            |                           |         |
| Montana:           |                            |                           |         | Aberdeen.....      |                            | 1                         |         |
| Great Falls.....   | 1                          | 1                         |         | Bellingham.....    | 0                          | 1                         |         |
| New Jersey:        |                            |                           |         | Everett.....       | 1                          | 1                         |         |
| Trenton.....       | 0                          | 1                         |         | Seattle.....       | 3                          | 3                         |         |
| New York:          |                            |                           |         | Spokane.....       | 2                          | 6                         |         |
| Niagara Falls..... | 0                          | 2                         |         | Vancouver.....     | 0                          | 2                         |         |
| North Carolina:    |                            |                           |         | Walla Walla.....   | 0                          | 1                         |         |
| Durham.....        | 0                          | 1                         |         | Wisconsin:         |                            |                           |         |
| Greensboro.....    | 0                          | 2                         |         | Kenosha.....       | 0                          | 1                         |         |
| North Dakota:      |                            |                           |         | Superior.....      | 1                          | 2                         |         |
| Grand Forks.....   | 0                          | 2                         |         |                    |                            |                           |         |

## TETANUS.

| City.           | Cases. | Deaths. | City.            | Cases. | Deaths. |
|-----------------|--------|---------|------------------|--------|---------|
| Connecticut:    |        |         | Massachusetts:   |        |         |
| New Haven.....  |        | 1       | Boston.....      | 1      |         |
| New London..... | 1      | 1       | Fall River.....  | 1      | 1       |
| Georgia:        |        |         | Michigan:        |        |         |
| Savannah.....   |        | 1       | Flint.....       |        | 1       |
| Illinois:       |        |         | New York:        |        |         |
| Chicago.....    | 2      |         | New York.....    |        | 1       |
| Kentucky:       |        |         | Tennessee:       |        |         |
| Henderson.....  |        | 1       | Nashville.....   |        | 1       |
| Maryland:       |        |         | Texas:           |        |         |
| Baltimore.....  | 1      | 1       | San Antonio..... |        | 1       |

## TUBERCULOSIS.

See p. 1595; also Current State summaries, p. 1585.



## CITY REPORTS FOR WEEK ENDED JUNE 23, 1923—Continued.

## TYPHOID FEVER.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding week of the years 1915 to 1922, inclusive. In instances in which data for the full eight years are incomplete, the median is that for the number of years for which information is available.

| City.                 | Median<br>for pre-<br>vious<br>years. | Week ended<br>June 23, 1923. |         | City.              | Median<br>for pre-<br>vious<br>years. | Week ended<br>June 23, 1923. |         |
|-----------------------|---------------------------------------|------------------------------|---------|--------------------|---------------------------------------|------------------------------|---------|
|                       |                                       | Cases.                       | Deaths. |                    |                                       | Cases.                       | Deaths. |
| Alabama:              |                                       |                              |         | New York:          |                                       |                              |         |
| Birmingham.....       | 6                                     | 2                            | 1       | Buffalo.....       | 1                                     | 2                            | 1       |
| California:           |                                       |                              |         | Cortland.....      | 0                                     | 1                            |         |
| Los Angeles.....      | 5                                     | 3                            |         | New York.....      | 18                                    | 14                           | 2       |
| Oakland.....          | 3                                     | 1                            |         | North Carolina:    |                                       |                              |         |
| Sacramento.....       | 1                                     | 1                            | 1       | Greensboro.....    | 0                                     | 1                            |         |
| District of Columbia: |                                       |                              |         | Raleigh.....       | 0                                     | 1                            | 1       |
| Washington.....       | 4                                     | 4                            |         | Wilmington.....    | 0                                     | 1                            |         |
| Georgia:              |                                       |                              |         | Winston-Salem..... | 1                                     | 1                            | 1       |
| Atlanta.....          | 2                                     | 4                            |         | Ohio:              |                                       |                              |         |
| Brunswick.....        | 0                                     | 1                            |         | Cleveland.....     | 3                                     | 2                            |         |
| Macon.....            | 2                                     | 3                            |         | Findlay.....       | 0                                     | 1                            |         |
| Rome.....             | 0                                     | 2                            |         | Oklahoma:          |                                       |                              |         |
| Savannah.....         | 2                                     | 2                            | 1       | Oklahoma.....      | 1                                     | 3                            |         |
| Illinois:             |                                       |                              |         | Tulsa.....         | 2                                     | 2                            |         |
| Centralia.....        | 0                                     | 2                            |         | Pennsylvania:      |                                       |                              |         |
| Chicago.....          | 3                                     | 4                            |         | Butler.....        | 0                                     | 7                            |         |
| Quincy.....           | 0                                     | 1                            |         | Coatesville.....   | 0                                     | 1                            |         |
| Indiana:              |                                       |                              |         | Philadelphia.....  | 8                                     | 2                            |         |
| Hammond.....          | 0                                     | 2                            |         | Pittsburgh.....    | 3                                     |                              | 1       |
| Kansas:               |                                       |                              |         | Pottsville.....    | 0                                     | 1                            |         |
| Hutchinson.....       | 0                                     | 1                            |         | Reading.....       | 0                                     | 1                            |         |
| Parsons.....          | 0                                     | 1                            |         | Rhode Island:      |                                       |                              |         |
| Topeka.....           | 1                                     | 1                            |         | Cranston.....      | 0                                     | 1                            |         |
| Kentucky:             |                                       |                              |         | South Carolina:    |                                       |                              |         |
| Louisville.....       | 3                                     | 1                            |         | Charleston.....    | 4                                     | 1                            | 1       |
| Louisiana:            |                                       |                              |         | Columbia.....      | 1                                     | 2                            |         |
| New Orleans.....      | 4                                     | 10                           | 1       | Greenville.....    | 0                                     | 3                            |         |
| Maine:                |                                       |                              |         | Tennessee:         |                                       |                              |         |
| Bangor.....           | 0                                     | 1                            |         | Chattanooga.....   | 0                                     | 3                            |         |
| Maryland:             |                                       |                              |         | Knoxville.....     | 0                                     | 1                            |         |
| Baltimore.....        | 5                                     | 2                            | 1       | Memphis.....       | 1                                     | 3                            |         |
| Massachusetts:        |                                       |                              |         | Nashville.....     | 3                                     | 2                            | 1       |
| Boston.....           | 3                                     | 1                            |         | Texas:             |                                       |                              |         |
| Brookline.....        | 0                                     | 1                            |         | Amarillo.....      |                                       | 1                            |         |
| Cambridge.....        | 1                                     | 1                            |         | Beaumont.....      | 0                                     |                              | 1       |
| Fall River.....       | 2                                     | 1                            |         | Dallas.....        | 4                                     | 3                            | 1       |
| Quincy.....           | 0                                     | 1                            |         | El Paso.....       | 0                                     | 2                            |         |
| Taunton.....          | 0                                     | 1                            |         | Fort Worth.....    | 2                                     | 1                            |         |
| Webster.....          | 0                                     | 1                            |         | Houston.....       | 2                                     | 2                            |         |
| Michigan:             |                                       |                              |         | Virginia:          |                                       |                              |         |
| Detroit.....          | 3                                     | 2                            | 1       | Norfolk.....       | 1                                     | 4                            |         |
| Muskegon.....         | 0                                     | 1                            |         | Richmond.....      | 1                                     | 4                            | 1       |
| Minnesota:            |                                       |                              |         | West Virginia:     |                                       |                              |         |
| Minneapolis.....      | 1                                     | 2                            |         | Bluefield.....     | 0                                     | 1                            |         |
| St. Paul.....         | 0                                     | 6                            |         | Charlestown.....   | 3                                     | 4                            |         |
| Missouri:             |                                       |                              |         | Huntington.....    | 0                                     | 4                            |         |
| St. Louis.....        | 2                                     | 5                            |         | Martinsburg.....   | 0                                     | 1                            | 1       |
| Montana:              |                                       |                              |         | Wheeling.....      | 1                                     | 1                            |         |
| Billings.....         | 0                                     | 1                            |         | Wisconsin:         |                                       |                              |         |
| New Jersey:           |                                       |                              |         | Appleton.....      | 0                                     | 1                            |         |
| Belleville.....       | 0                                     | 1                            |         |                    |                                       |                              |         |
| Newark.....           | 0                                     | 1                            |         |                    |                                       |                              |         |
| Trenton.....          | 0                                     | 1                            |         |                    |                                       |                              |         |

## TYPHUS FEVER.

| City.        | Cases. | Deaths. |
|--------------|--------|---------|
| Georgia:     |        |         |
| Atlanta..... | 1      |         |



## CITY REPORTS FOR WEEK ENDED JUNE 23, 1923—Continued.

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

| City.                  | Population Jan. 1, 1920. | Total deaths from all causes. | Diphtheria. |         | Measles. |         | Scarlet fever. |         | Tuberculosis. |         |
|------------------------|--------------------------|-------------------------------|-------------|---------|----------|---------|----------------|---------|---------------|---------|
|                        |                          |                               | Cases.      | Deaths. | Cases.   | Deaths. | Cases.         | Deaths. | Cases.        | Deaths. |
| Alabama:               |                          |                               |             |         |          |         |                |         |               |         |
| Birmingham.....        | 178,806                  | 72                            | 1           | 1       | 46       | 3       |                |         | 11            | 2       |
| Mobile.....            | 60,777                   | 22                            |             |         | 9        |         |                |         |               | 1       |
| Montgomery.....        | 43,464                   | 23                            |             |         | 2        |         |                |         |               | 3       |
| Tuscaloosa.....        | 11,996                   |                               |             |         | 10       |         |                |         | 3             |         |
| Arkansas:              |                          |                               |             |         |          |         |                |         |               |         |
| Fort Smith.....        | 28,870                   |                               | 2           |         | 11       |         |                |         |               |         |
| Little Rock.....       | 65,142                   |                               |             |         | 6        |         |                |         | 2             |         |
| North Little Rock..... | 14,048                   |                               |             |         | 4        |         |                |         | 1             |         |
| California:            |                          |                               |             |         |          |         |                |         |               |         |
| Alameda.....           | 28,806                   | 3                             |             |         | 8        |         |                |         |               |         |
| Eureka.....            | 12,923                   | 7                             |             |         | 17       |         |                |         |               |         |
| Glendale.....          | 13,536                   | 5                             |             |         |          |         |                |         |               |         |
| Long Beach.....        | 55,593                   | 17                            | 1           | 1       | 4        |         | 3              |         |               |         |
| Los Angeles.....       | 576,673                  | 204                           | 39          |         | 108      |         | 30             |         | 70            | 22      |
| Oakland.....           | 216,261                  | 45                            | 11          | 1       | 30       |         | 8              |         | 7             | 5       |
| Pasadena.....          | 45,354                   | 14                            |             |         | 3        |         | 3              |         | 1             | 2       |
| Richmond.....          | 16,813                   | 1                             |             |         | 2        |         |                |         | 1             |         |
| Riverside.....         | 19,341                   | 6                             |             |         |          |         | 1              |         |               |         |
| Sacramento.....        | 65,908                   | 23                            | 1           |         | 58       | 1       | 7              |         | 3             | 3       |
| San Bernardino.....    | 18,721                   | 8                             | 1           |         | 7        |         | 3              |         |               | 1       |
| San Diego.....         | 74,683                   | 27                            | 6           | 1       | 22       |         | 10             |         | 3             | 5       |
| San Francisco.....     | 506,676                  | 125                           | 25          | 4       | 129      |         | 19             |         | 13            | 11      |
| Santa Ana.....         | 15,485                   | 9                             |             |         | 3        |         | 1              |         |               | 1       |
| Santa Barbara.....     | 19,441                   | 3                             |             |         |          |         |                |         |               | 1       |
| Santa Cruz.....        | 10,917                   | 8                             |             |         |          |         |                |         |               |         |
| Stockton.....          | 40,296                   | 9                             |             |         | 5        |         |                |         |               |         |
| Colorado:              |                          |                               |             |         |          |         |                |         |               |         |
| Denver.....            | 256,491                  | 82                            | 28          | 2       | 88       | 3       | 14             |         |               | 16      |
| Pueblo.....            | 43,050                   | 9                             |             |         | 2        |         |                | 1       |               |         |
| Trinidad.....          | 10,906                   |                               | 3           |         | 3        |         |                |         |               |         |
| Connecticut:           |                          |                               |             |         |          |         |                |         |               |         |
| Bridgeport.....        | 143,555                  | 36                            | 4           |         | 5        |         | 6              |         | 3             | 4       |
| Greenwich (town).....  | 22,123                   |                               |             |         | 9        |         |                |         |               |         |
| Hartford.....          | 138,036                  | 44                            | 4           | 1       |          |         | 9              |         | 5             | 1       |
| Manchester (town)..... | 18,370                   | 2                             |             |         |          |         |                |         |               |         |
| Meriden (city).....    | 29,867                   |                               |             |         | 1        |         |                |         | 3             |         |
| Millford (town).....   | 10,193                   | 1                             |             |         |          |         |                |         |               |         |
| New Britain.....       | 59,316                   | 14                            | 2           | 1       |          |         | 2              |         |               |         |
| New Haven.....         | 162,537                  | 35                            | 4           |         | 7        |         |                |         | 7             | 2       |
| New London.....        | 25,688                   | 11                            |             |         | 3        |         |                |         |               |         |
| District of Columbia:  |                          |                               |             |         |          |         |                |         |               |         |
| Washington.....        | 437,571                  | 149                           | 6           |         | 63       | 1       | 14             |         | 19            | 14      |
| Florida:               |                          |                               |             |         |          |         |                |         |               |         |
| Key West.....          | 18,749                   | 3                             |             |         |          |         |                |         |               |         |
| St. Petersburg.....    | 14,237                   | 2                             |             |         |          |         |                |         |               |         |
| Tampa.....             | 51,608                   | 13                            |             |         | 2        |         |                |         | 1             | 2       |
| Georgia:               |                          |                               |             |         |          |         |                |         |               |         |
| Aibany.....            | 11,555                   |                               |             |         |          |         |                |         | 1             |         |
| Atlanta.....           | 200,616                  | 88                            | 1           |         | 18       | 3       | 1              |         | 5             | 4       |
| Augusta.....           | 52,548                   | 18                            |             |         | 27       | 2       |                |         |               | 2       |
| Brunswick.....         | 14,413                   | 4                             |             |         | 4        |         |                |         |               | 1       |
| Macon.....             | 52,995                   |                               |             |         | 10       |         | 1              |         |               |         |
| Rome.....              | 13,252                   | 125                           |             |         | 3        |         |                |         |               |         |
| Savannah.....          | 83,252                   | 40                            |             |         | 23       | 1       |                |         | 5             | 7       |
| Idaho:                 |                          |                               |             |         |          |         |                |         |               |         |
| Boise.....             | 21,393                   | 3                             |             |         |          |         |                |         |               |         |
| Illinois:              |                          |                               |             |         |          |         |                |         |               |         |
| Alton.....             | 24,682                   | 6                             |             |         | 2        |         |                |         | 1             |         |
| Aurora.....            | 36,397                   | 13                            |             |         | 11       |         |                |         |               |         |
| Bloomington.....       | 28,725                   | 7                             |             |         | 6        |         |                |         | 3             |         |
| Centralia.....         | 12,491                   | 3                             |             |         | 6        |         |                |         |               |         |
| Chicago.....           | 2,701,705                | 585                           | 61          | 3       | 258      | 6       | 61             | 1       | 224           | 49      |
| Cicero.....            | 44,995                   | 6                             |             |         | 15       |         |                |         | 1             |         |
| Decatur.....           | 43,818                   | 9                             |             |         | 21       |         |                |         | 2             | 3       |
| East St. Louis.....    | 66,767                   | 23                            |             | 1       |          |         |                |         |               |         |
| Elgin.....             | 27,454                   | 5                             |             |         | 16       |         |                |         |               |         |
| Evanston.....          | 37,234                   | 4                             |             |         | 19       |         | 5              |         | 1             |         |
| Freeport.....          | 19,669                   | 3                             |             |         | 26       |         |                |         |               | 1       |
| Galesburg.....         | 23,434                   | 7                             |             |         | 7        |         | 1              |         |               |         |
| Jacksonville.....      | 15,713                   | 9                             |             |         | 2        |         | 1              |         |               |         |
| Kewanee.....           | 18,026                   | 4                             |             |         | 2        |         | 1              |         | 1             |         |
| Mattoon.....           | 13,552                   |                               |             |         | 3        |         |                |         | 2             |         |
| Oak Park.....          | 39,858                   | 12                            |             |         | 30       |         |                |         | 1             |         |

## CITY REPORTS FOR WEEK ENDED JUNE 23, 1923—Continued.

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

| City.                 | Popula-<br>tion Jan.<br>1, 1920. | Total<br>deaths<br>from<br>all<br>causes. | Diphtheria. |         | Measles. |         | Scarlet<br>fever. |         | Tuber-<br>culosis. |         |  |
|-----------------------|----------------------------------|---|-------------|---------|----------|---------|-------------------|---------|--------------------|---------|--|
|                       |                                  |   | Cases.      | Deaths. | Cases.   | Deaths. | Cases.            | Deaths. | Cases.             | Deaths. |  |
| Illinois—Continued.   |                                  |   |             |         |          |         |                   |         |                    |         |  |
| Pekin.....            | 12,086                           |   |             |         | 1        |         | 1                 |         |                    |         |  |
| Peoria.....           | 76,121                           | 26  |             |         | 4        |         | 2                 |         |                    |         |  |
| Quincy.....           | 35,978                           | 14  |             |         | 18       |         |                   |         |                    |         |  |
| Rock Island.....      | 35,177                           | 3   |             |         | 29       |         |                   |         |                    |         |  |
| Springfield.....      | 59,183                           | 26  |             |         | 1        |         | 1                 |         | 1                  | 1       |  |
| Urbana.....           | 10,244                           |   |             |         | 2        |         |                   |         |                    |         |  |
| Indiana:              |                                  |   |             |         |          |         |                   |         |                    |         |  |
| Anderson.....         | 29,767                           | 6   |             |         | 17       |         |                   |         |                    |         |  |
| Bloomington.....      | 11,595                           | 1   |             |         |          |         |                   |         |                    |         |  |
| Crawfordsville.....   | 10,139                           | 3   |             |         | 10       |         |                   |         |                    |         |  |
| East Chicago.....     | 35,967                           | 11  |             |         | 10       | 1       |                   | 1       |                    | 2       |  |
| Elwood.....           | 10,790                           | 3   |             |         |          |         |                   |         | 1                  | 1       |  |
| Fort Wayne.....       | 86,549                           | 21  | 3           |         | 19       |         | 4                 |         | 1                  | 1       |  |
| Frankfort.....        | 11,585                           | 1   |             |         | 11       |         | 1                 |         |                    |         |  |
| Hammond.....          | 36,004                           | 5   |             |         | 2        |         | 2                 |         |                    |         |  |
| Huntington.....       | 14,000                           | 8   |             |         |          |         |                   |         |                    |         |  |
| Indianapolis.....     | 314,194                          | 107                                       | 3           | 1       | 68       |         |                   |         | 5                  | 12      |  |
| Kokomo.....           | 30,067                           | 11  |             |         | 10       | 1       |                   |         |                    | 2       |  |
| La Fayette.....       | 22,486                           | 5   |             |         | 15       |         |                   |         |                    | 1       |  |
| Logansport.....       | 21,626                           | 5   |             |         | 2        |         |                   |         |                    |         |  |
| Michigan City.....    | 19,457                           | 3   |             |         |          |         |                   |         |                    | 1       |  |
| Mishawaka.....        | 15,195                           | 2   |             |         |          |         |                   |         |                    |         |  |
| Muncie.....           | 36,524                           | 10  |             |         | 50       |         |                   |         |                    |         |  |
| South Bend.....       | 70,983                           | 9   | 1           |         | 1        |         | 4                 |         | 3                  | 1       |  |
| Terre Haute.....      | 66,083                           | 16  |             |         | 6        |         | 3                 |         |                    | 2       |  |
| Iowa:                 |                                  |   |             |         |          |         |                   |         |                    |         |  |
| Burlington.....       | 24,057                           | 5   |             |         | 4        |         |                   |         |                    |         |  |
| Cedar Rapids.....     | 45,566                           |   |             |         | 3        | 3       |                   | 1       |                    |         |  |
| Davenport.....        | 56,727                           |   | 4           |         | 14       |         |                   |         |                    |         |  |
| Dubuque.....          | 39,141                           |   |             |         | 2        |         |                   |         |                    |         |  |
| Iowa City.....        | 11,267                           |   | 1           |         |          |         |                   |         |                    |         |  |
| Marshalltown.....     | 15,731                           |   | 1           |         |          |         | 1                 |         |                    |         |  |
| Muscatine.....        | 16,068                           | 5   |             |         |          |         |                   |         |                    |         |  |
| Ottuma.....           | 23,003                           |   | 2           |         | 3        |         |                   |         |                    |         |  |
| Sioux City.....       | 71,227                           | 0   | 2           |         |          |         |                   |         | 1                  |         |  |
| Waterloo.....         | 36,230                           |   |             |         | 9        |         |                   |         |                    |         |  |
| Kansas:               |                                  |   |             |         |          |         |                   |         |                    |         |  |
| Atchison.....         | 12,630                           |   |             |         |          |         |                   |         | 4                  |         |  |
| Coffeyville.....      | 13,452                           | 5   |             |         | 9        |         |                   |         | 1                  |         |  |
| Fort Scott.....       | 10,693                           | 2   | 1           |         | 1        |         |                   |         |                    |         |  |
| Hutchinson.....       | 23,298                           |   |             |         | 2        |         |                   |         | 1                  |         |  |
| Kansas City.....      | 101,177                          |   | 4           |         | 43       |         | 1                 |         | 4                  |         |  |
| Parsons.....          | 16,028                           |   |             |         |          |         |                   |         | 2                  |         |  |
| Topeka.....           | 50,022                           | 13  | 2           |         | 90       |         | 1                 |         |                    |         |  |
| Wichita.....          | 72,217                           | 19  |             |         | 19       |         | 2                 |         |                    | 1       |  |
| Kentucky:             |                                  |   |             |         |          |         |                   |         |                    |         |  |
| Henderson.....        | 12,169                           | 3   |             |         |          |         |                   |         |                    | 1       |  |
| Lexington.....        | 41,534                           | 15  |             |         | 6        |         |                   |         |                    | 2       |  |
| Louisville.....       | 234,891                          | 76  | 5           |         | 16       |         | 5                 |         | 22                 | 7       |  |
| Louisiana:            |                                  |   |             |         |          |         |                   |         |                    |         |  |
| New Orleans.....      | 387,219                          | 125                                       | 8           |         | 27       | 4       | 1                 |         | 21                 | 14      |  |
| Maine:                |                                  |   |             |         |          |         |                   |         |                    |         |  |
| Auburn.....           | 16,985                           | 0   |             |         | 8        |         | 1                 |         |                    |         |  |
| Bangor.....           | 25,978                           |   |             |         | 10       |         |                   |         |                    |         |  |
| Biddeford.....        | 18,008                           | 8   |             |         | 1        |         |                   |         |                    |         |  |
| Lewiston.....         | 31,791                           | 17  | 1           |         | 12       |         | 1                 |         | 1                  |         |  |
| Portland.....         | 69,272                           | 12  | 2           |         | 2        |         | 2                 |         |                    |         |  |
| Sanford (town).....   | 10,691                           | 0   |             |         |          |         |                   |         |                    |         |  |
| Maryland:             |                                  |   |             |         |          |         |                   |         |                    |         |  |
| Baltimore.....        | 733,826                          | 194                                       | 18          |         | 197      | 2       | 55                | 1       | 21                 | 22      |  |
| Cumberland.....       | 29,837                           | 5   |             |         | 1        |         |                   |         | 2                  |         |  |
| Frederick.....        | 11,066                           | 2   |             |         | 4        |         |                   |         | 2                  |         |  |
| Massachusetts:        |                                  |   |             |         |          |         |                   |         |                    |         |  |
| Adams (town).....     | 12,967                           | 2   |             |         |          |         |                   |         |                    |         |  |
| Amesbury (town).....  | 10,036                           | 5   |             |         |          |         |                   |         |                    |         |  |
| Arlington (town)..... | 18,665                           | 5   | 1           |         | 1        |         | 4                 |         | 1                  |         |  |
| Attleboro.....        | 19,731                           | 3   |             |         |          |         |                   |         |                    |         |  |
| Belmont (town).....   | 10,749                           | 3   |             |         | 18       |         |                   |         | 1                  |         |  |
| Beverly.....          | 22,561                           | 7   |             |         |          |         |                   |         | 2                  |         |  |
| Boston.....           | 748,060                          | 195                                       | 57          | 3       | 140      | 2       | 57                |         | 37                 | 10      |  |
| Braintree (town)..... | 10,580                           | 3   |             |         | 6        |         | 1                 |         |                    | 1       |  |
| Brockton.....         | 66,254                           | 5   | 3           |         | 19       |         | 7                 |         | 5                  | 1       |  |
| Brookline.....        | 37,748                           | 10  | 1           |         | 18       |         | 3                 |         | 1                  |         |  |

## CITY REPORTS FOR WEEK ENDED JUNE 23, 1923—Continued.

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

| City.                    | Popula-<br>tion Jan.<br>1, 1920. | Total<br>deaths<br>from<br>all<br>causes. | Diphtheria. |         | Measles. |         | Scarlet<br>fever. |         | Tuber-<br>culosis. |         |
|--------------------------|----------------------------------|---|-------------|---------|----------|---------|-------------------|---------|--------------------|---------|
|                          |                                  |   | Cases.      | Deaths. | Cases.   | Deaths. | Cases.            | Deaths. | Cases.             | Deaths. |
| Massachusetts—Continued. |                                  |   |             |         |          |         |                   |         |                    |         |
| Cambridge.....           | 109,694                          | 28  | 4           | .....   | 10       | 1       | 17                | .....   | 2                  | 1       |
| Chelsea.....             | 43,184                           | 10  | 2           | .....   | .....    | .....   | 2                 | .....   | 3                  | .....   |
| Chicopee.....            | 36,214                           | 4   | .....       | .....   | .....    | .....   | 1                 | .....   | .....              | 1       |
| Clinton.....             | 12,979                           | 2   | .....       | .....   | .....    | .....   | .....             | .....   | .....              | .....   |
| Danvers.....             | 11,108                           | .....                                     | 2           | .....   | .....    | .....   | .....             | .....   | .....              | .....   |
| Dedham.....              | 10,792                           | 2   | .....       | .....   | .....    | .....   | .....             | .....   | .....              | .....   |
| Everett.....             | 40,120                           | 2   | 1           | .....   | 2        | .....   | 2                 | .....   | .....              | .....   |
| Fall River.....          | 120,485                          | 29  | 4           | .....   | 2        | .....   | 4                 | .....   | 4                  | 2       |
| Frammingham.....         | 17,033                           | 6   | .....       | .....   | 1        | .....   | 1                 | .....   | .....              | .....   |
| Gardner.....             | 16,971                           | 2   | .....       | .....   | 3        | .....   | .....             | .....   | 2                  | .....   |
| Greenfield.....          | 15,462                           | 1   | .....       | .....   | .....    | .....   | .....             | .....   | .....              | .....   |
| Haverhill.....           | 53,884                           | 11  | 3           | .....   | 46       | .....   | 7                 | .....   | 2                  | 2       |
| Lawrence.....            | 94,270                           | 11  | 1           | .....   | 12       | .....   | .....             | .....   | 3                  | .....   |
| Leominster.....          | 19,744                           | 5   | .....       | .....   | 12       | .....   | 1                 | .....   | .....              | .....   |
| Lowell.....              | 112,759                          | 31  | 1           | .....   | 6        | .....   | 12                | .....   | 6                  | 3       |
| Lynn.....                | 99,148                           | 22  | 3           | .....   | 1        | .....   | 7                 | .....   | .....              | 3       |
| Malden.....              | 49,103                           | 8   | 1           | .....   | 5        | .....   | 3                 | .....   | 1                  | .....   |
| Medford.....             | 39,038                           | 7   | 5           | .....   | 3        | .....   | 2                 | .....   | 1                  | .....   |
| Melrose.....             | 18,204                           | 6   | .....       | .....   | 10       | .....   | 1                 | .....   | .....              | .....   |
| Methuen.....             | 15,189                           | 6   | .....       | .....   | 9        | .....   | .....             | .....   | .....              | 1       |
| New Bedford.....         | 121,217                          | 37  | 1           | .....   | .....    | .....   | 1                 | .....   | 8                  | 4       |
| Newburyport.....         | 15,618                           | 4   | .....       | .....   | 3        | .....   | .....             | .....   | .....              | .....   |
| Newton.....              | 46,054                           | 11  | .....       | .....   | 11       | .....   | 3                 | .....   | 1                  | .....   |
| North Adams.....         | 22,282                           | 4   | .....       | .....   | .....    | .....   | 1                 | .....   | 1                  | 1       |
| Northampton.....         | 21,951                           | 7   | .....       | .....   | .....    | .....   | 7                 | .....   | 1                  | .....   |
| Northbridge.....         | 10,174                           | 3   | .....       | .....   | .....    | .....   | .....             | .....   | .....              | 1       |
| Peabody.....             | 19,552                           | 1   | 1           | .....   | 2        | .....   | 2                 | .....   | 2                  | .....   |
| Pittsfield.....          | 41,763                           | 10  | .....       | .....   | .....    | .....   | 4                 | .....   | .....              | 2       |
| Plymouth.....            | 13,045                           | 5   | .....       | .....   | .....    | .....   | .....             | .....   | .....              | .....   |
| Quincy.....              | 47,876                           | 13  | 2           | .....   | 9        | .....   | 8                 | .....   | .....              | 1       |
| Salem.....               | 42,529                           | 1   | 2           | .....   | .....    | .....   | 1                 | .....   | 4                  | 1       |
| Somerville.....          | 93,091                           | 17  | 4           | 1       | 6        | .....   | 1                 | .....   | 2                  | 1       |
| Southbridge.....         | 14,245                           | 1   | .....       | .....   | 8        | .....   | .....             | .....   | .....              | .....   |
| Springfield.....         | 129,614                          | 34  | 2           | 1       | .....    | .....   | 4                 | .....   | 7                  | 2       |
| Taunton.....             | 37,137                           | 14  | 1           | .....   | .....    | .....   | 5                 | .....   | 2                  | 2       |
| Wakefield.....           | 13,025                           | 0   | 1           | .....   | 5        | .....   | 1                 | .....   | 3                  | .....   |
| Waltham.....             | 30,915                           | 3   | 2           | .....   | 2        | .....   | 1                 | .....   | 1                  | 1       |
| Watertown.....           | 21,457                           | 1   | 2           | .....   | 1        | .....   | 3                 | .....   | .....              | .....   |
| Webster.....             | 13,258                           | .....                                     | .....       | .....   | 1        | .....   | 4                 | .....   | 1                  | .....   |
| West Springfield.....    | 13,443                           | 2   | .....       | .....   | .....    | .....   | .....             | .....   | .....              | .....   |
| Westfield.....           | 18,604                           | 5   | 1           | .....   | .....    | .....   | .....             | .....   | .....              | .....   |
| Winthrop.....            | 15,455                           | 3   | .....       | .....   | .....    | .....   | .....             | .....   | .....              | .....   |
| Woburn.....              | 16,574                           | 5   | .....       | .....   | .....    | .....   | .....             | .....   | .....              | .....   |
| Worcester.....           | 179,754                          | 39  | 5           | 2       | .....    | .....   | 14                | 1       | .....              | 2       |
| Michigan:                |                                  |   |             |         |          |         |                   |         |                    |         |
| Alpena.....              | 11,101                           | .....                                     | .....       | .....   | 1        | .....   | .....             | .....   | .....              | .....   |
| Ann Arbor.....           | 19,516                           | 12  | .....       | .....   | 43       | .....   | .....             | .....   | 2                  | .....   |
| Battle Creek.....        | 36,164                           | 2   | 2           | 1       | 68       | .....   | 3                 | 1       | .....              | .....   |
| Benton Harbor.....       | 12,233                           | 6   | .....       | .....   | .....    | .....   | .....             | .....   | .....              | .....   |
| Detroit.....             | 993,678                          | 246                                       | 29          | 1       | 189      | 3       | 61                | 1       | 37                 | 13      |
| Flint.....               | 91,599                           | 27  | 2           | .....   | 56       | .....   | 3                 | .....   | 1                  | 3       |
| Grand Rapids.....        | 137,634                          | 34  | 6           | .....   | 211      | .....   | 3                 | .....   | 4                  | .....   |
| Hamtramck.....           | 48,615                           | 6   | .....       | .....   | .....    | .....   | .....             | .....   | .....              | 1       |
| Highland Park.....       | 46,499                           | 8   | 1           | .....   | 9        | .....   | 6                 | .....   | .....              | 1       |
| Jackson.....             | 48,374                           | 14  | .....       | .....   | 23       | .....   | 1                 | .....   | .....              | .....   |
| Kalamazoo.....           | 48,487                           | 18  | .....       | 1       | 29       | .....   | 6                 | .....   | 2                  | 1       |
| Marquette.....           | 12,718                           | 4   | 1           | .....   | 2        | .....   | .....             | .....   | .....              | .....   |
| Muskegon.....            | 36,570                           | 7   | 1           | .....   | 25       | .....   | 1                 | .....   | .....              | .....   |
| Pontiac.....             | 34,273                           | 11  | 1           | .....   | 27       | .....   | 9                 | .....   | .....              | 1       |
| Port Huron.....          | 25,944                           | 7   | 1           | 1       | 9        | .....   | 2                 | .....   | .....              | .....   |
| Sault Ste. Marie.....    | 12,096                           | 4   | .....       | .....   | .....    | .....   | .....             | .....   | .....              | .....   |
| Minnesota:               |                                  |   |             |         |          |         |                   |         |                    |         |
| Duluth.....              | 98,917                           | 17  | 2           | 1       | 2        | .....   | 3                 | .....   | 5                  | .....   |
| Faribault.....           | 11,089                           | 0   | 1           | .....   | 2        | .....   | .....             | .....   | .....              | .....   |
| Hibbing.....             | 15,089                           | .....                                     | 2           | .....   | 3        | .....   | 4                 | .....   | .....              | .....   |
| Minneapolis.....         | 380,582                          | 91  | 14          | .....   | 56       | 2       | 19                | 1       | 18                 | 4       |
| Rochester.....           | 13,722                           | 33  | .....       | .....   | .....    | .....   | .....             | .....   | .....              | .....   |
| St. Cloud.....           | 15,873                           | .....                                     | 2           | .....   | .....    | .....   | 2                 | .....   | 2                  | .....   |
| St. Paul.....            | 234,698                          | 48  | 15          | 1       | 43       | 1       | 10                | .....   | 10                 | 5       |
| Winona.....              | 19,143                           | .....                                     | .....       | .....   | 4        | .....   | .....             | .....   | .....              | .....   |

## CITY REPORTS FOR WEEK ENDED JUNE 23, 1923—Continued.

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

| City.                 | Popula-<br>tion Jan.<br>1, 1920. | Total<br>deaths<br>from<br>all<br>causes. | Diphtheria. |         | Measles. |         | Scarlet<br>fever. |         | Tuber-<br>culosis. |         |
|-----------------------|----------------------------------|---|-------------|---------|----------|---------|-------------------|---------|--------------------|---------|
|                       |                                  |   | Cases.      | Deaths. | Cases.   | Deaths. | Cases.            | Deaths. | Cases.             | Deaths. |
| <b>Missouri:</b>      |                                  |   |             |         |          |         |                   |         |                    |         |
| Joplin.....           | 29,902                           | —   | —           | —       | 3        | —       | —                 | —       | —                  | —       |
| Kansas City.....      | 324,410                          | 97  | 7           | —       | 51       | 2       | 3                 | —       | 8                  | 5       |
| St. Joseph.....       | 77,939                           | 26  | 1           | —       | 30       | —       | 2                 | —       | —                  | —       |
| St. Louis.....        | 772,897                          | 204                                       | 22          | —       | 27       | —       | 13                | —       | 31                 | 9       |
| Springfield.....      | 39,631                           | 16  | —           | —       | —        | —       | —                 | —       | —                  | 4       |
| <b>Montana:</b>       |                                  |   |             |         |          |         |                   |         |                    |         |
| Billings.....         | 15,100                           | 5   | —           | —       | —        | —       | —                 | —       | —                  | 1       |
| Great Falls.....      | 24,121                           | 7   | —           | —       | —        | —       | —                 | —       | —                  | —       |
| Helena.....           | 12,037                           | 2   | —           | —       | 8        | —       | —                 | —       | —                  | —       |
| Missoula.....         | 12,668                           | 6   | —           | —       | —        | —       | 4                 | —       | —                  | —       |
| <b>Nebraska:</b>      |                                  |   |             |         |          |         |                   |         |                    |         |
| Lincoln.....          | 54,948                           | 15  | 2           | 1       | 5        | —       | 1                 | —       | 1                  | —       |
| Omaha.....            | 191,601                          | 57  | 7           | —       | 4        | —       | 4                 | —       | —                  | 2       |
| <b>Nevada:</b>        |                                  |   |             |         |          |         |                   |         |                    |         |
| Reno.....             | 12,016                           | 4   | —           | —       | —        | —       | —                 | —       | —                  | —       |
| <b>New Hampshire:</b> |                                  |   |             |         |          |         |                   |         |                    |         |
| Berlin.....           | 16,104                           | 6   | —           | —       | —        | —       | —                 | —       | —                  | —       |
| Concord.....          | 22,167                           | 5   | 1           | —       | 10       | —       | —                 | —       | —                  | —       |
| Dover.....            | 13,029                           | 3   | —           | —       | 1        | —       | —                 | —       | —                  | —       |
| Keene.....            | 11,210                           | 3   | —           | —       | —        | —       | —                 | —       | —                  | —       |
| Manchester.....       | 78,384                           | 26  | 1           | —       | 1        | —       | 2                 | —       | —                  | 3       |
| <b>New Jersey:</b>    |                                  |   |             |         |          |         |                   |         |                    |         |
| Asbury Park.....      | 12,400                           | 4   | (1)         | —       | 1        | —       | 5                 | —       | —                  | —       |
| Atlantic City.....    | 50,707                           | 14  | 2           | 2       | —        | —       | 1                 | —       | 1                  | 1       |
| Bayonne.....          | 76,754                           | —   | —           | —       | —        | —       | —                 | —       | —                  | —       |
| Belleville.....       | 15,690                           | —   | —           | —       | 5        | —       | —                 | —       | —                  | —       |
| Bloomfield.....       | 22,019                           | 2   | —           | —       | 4        | —       | 2                 | —       | —                  | —       |
| Clifton.....          | 26,470                           | 5   | —           | —       | 3        | —       | —                 | —       | —                  | —       |
| Elizabeth.....        | 95,783                           | —   | 6           | —       | 6        | —       | —                 | —       | —                  | 3       |
| Englewood.....        | 11,627                           | 1   | —           | —       | 3        | —       | —                 | —       | —                  | —       |
| Garfield.....         | 19,381                           | 2   | —           | —       | —        | —       | 1                 | —       | —                  | —       |
| Hackensack.....       | 17,667                           | 4   | 1           | —       | 23       | —       | —                 | —       | —                  | 3       |
| Harrison.....         | 15,721                           | —   | —           | —       | —        | —       | 1                 | —       | 1                  | —       |
| Hoboken.....          | 68,166                           | 16  | 1           | —       | 3        | —       | 3                 | —       | 3                  | 1       |
| Jersey City.....      | 298,109                          | —   | 7           | —       | 10       | —       | 4                 | —       | 20                 | —       |
| Kearny.....           | 26,724                           | 9   | —           | —       | 6        | —       | 1                 | —       | 1                  | —       |
| Long Branch.....      | 13,521                           | 4   | —           | —       | 8        | —       | —                 | —       | —                  | —       |
| Montclair.....        | 28,810                           | 6   | —           | —       | 19       | —       | 1                 | —       | —                  | 1       |
| Morristown.....       | 12,548                           | 3   | —           | —       | 2        | —       | 1                 | —       | —                  | —       |
| Newark.....           | 414,524                          | 112                                       | 10          | —       | 57       | —       | 11                | —       | 17                 | 13      |
| Orange.....           | 33,268                           | 10  | —           | —       | —        | —       | —                 | —       | —                  | —       |
| Passaic.....          | 63,841                           | 16  | 1           | —       | 2        | —       | —                 | —       | 4                  | 3       |
| Paterson.....         | 135,875                          | —   | 12          | —       | 60       | —       | 2                 | —       | 6                  | —       |
| Perth Amboy.....      | 41,707                           | 5   | —           | —       | 6        | —       | 5                 | —       | 2                  | —       |
| Phillipsburg.....     | 16,923                           | 3   | —           | —       | —        | —       | —                 | —       | —                  | —       |
| Plainfield.....       | 27,700                           | 5   | —           | —       | —        | —       | 1                 | —       | —                  | —       |
| Summit.....           | 10,174                           | 4   | —           | —       | 8        | —       | —                 | —       | —                  | —       |
| Trenton.....          | 119,289                          | 37  | 10          | 1       | 1        | —       | 3                 | —       | 2                  | 1       |
| Union (town).....     | 20,651                           | —   | 1           | —       | —        | —       | —                 | —       | —                  | —       |
| West Hoboken.....     | 40,074                           | 2   | —           | —       | 6        | —       | —                 | —       | —                  | 1       |
| West New York.....    | 29,926                           | 1   | 3           | —       | 7        | —       | 1                 | —       | 1                  | —       |
| West Orange.....      | 15,573                           | 3   | —           | —       | 3        | —       | —                 | —       | —                  | —       |
| <b>New Mexico:</b>    |                                  |   |             |         |          |         |                   |         |                    |         |
| Albuquerque.....      | 15,157                           | 4   | 2           | —       | 9        | —       | 1                 | —       | —                  | 1       |
| <b>New York:</b>      |                                  |   |             |         |          |         |                   |         |                    |         |
| Albany.....           | 113,344                          | —   | 1           | —       | 173      | —       | 4                 | —       | 4                  | —       |
| Amsterdam.....        | 33,524                           | 5   | 1           | —       | 6        | —       | —                 | —       | 2                  | —       |
| Auburn.....           | 36,192                           | 11  | —           | —       | 11       | —       | —                 | —       | —                  | —       |
| Buffalo.....          | 506,775                          | 113                                       | 14          | 1       | 64       | 3       | 24                | —       | 31                 | 13      |
| Cohoes.....           | 22,987                           | 7   | —           | —       | 6        | —       | —                 | —       | 1                  | 1       |
| Cortland.....         | 13,294                           | 4   | —           | —       | 5        | —       | 1                 | —       | 1                  | —       |
| Geneva.....           | 14,648                           | 5   | —           | —       | —        | —       | —                 | —       | —                  | 1       |
| Glens Falls.....      | 16,638                           | 5   | —           | —       | —        | —       | —                 | —       | —                  | —       |
| Hornell.....          | 15,025                           | 2   | —           | —       | 25       | —       | —                 | —       | —                  | —       |
| Hudson.....           | 11,745                           | 1   | 2           | —       | 1        | —       | —                 | —       | —                  | —       |
| Ithaca.....           | 17,004                           | 13  | 1           | —       | 15       | —       | —                 | —       | 1                  | —       |
| Lackawanna.....       | 17,918                           | 6   | —           | —       | 33       | —       | —                 | —       | 3                  | —       |
| Little Falls.....     | 13,029                           | 7   | 2           | 2       | —        | —       | —                 | —       | —                  | —       |
| Lockport.....         | 21,308                           | 5   | —           | —       | —        | —       | 3                 | —       | 1                  | —       |
| Mount Vernon.....     | 42,726                           | 7   | 1           | —       | —        | —       | 1                 | —       | 1                  | —       |

<sup>1</sup> The report of 30 cases of diphtheria during the week ended May 26, 1923, published in the Public Health Reports, Vol. 38, No. 24, June 13, 1923, was erroneous. No case of diphtheria was reported in Asbury Park during that week.

## CITY REPORTS FOR WEEK ENDED JUNE 23, 1923—Continued.

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

| City.                  | Population Jan. 1, 1920. | Total deaths from all causes. | Diphtheria. |         | Measles. |         | Scarlet fever. |         | Tuberculosis. |         |
|------------------------|--------------------------|-------------------------------|-------------|---------|----------|---------|----------------|---------|---------------|---------|
|                        |                          |                               | Cases.      | Deaths. | Cases.   | Deaths. | Cases.         | Deaths. | Cases.        | Deaths. |
| New York—Continued.    |                          |                               |             |         |          |         |                |         |               |         |
| New York.....          | 5,620,048                | 1,199                         | 139         | 6       | 305      | 7       | 128            |         | 226           | 97      |
| Newburgh.....          | 30,366                   | 18                            |             |         | 3        |         | 3              |         |               |         |
| Niagara Falls.....     | 50,760                   | 16                            | 1           |         | 18       |         | 2              |         |               |         |
| North Tonawanda.....   | 15,482                   | 5                             |             |         | 6        |         |                |         |               |         |
| Rochester.....         | 295,750                  | 47                            | 6           |         | 42       |         | 2              | 1       | 19            | 2       |
| Rome.....              | 26,341                   | 6                             |             |         | 4        |         | 1              |         |               | 1       |
| Saratoga Springs.....  | 13,181                   | 5                             |             |         |          |         | 4              |         |               |         |
| Schenectady.....       | 88,723                   | 11                            | 3           |         | 87       |         | 1              |         |               | 1       |
| Syracuse.....          | 171,717                  | 53                            | 6           |         | 237      | 2       | 12             |         | 12            | 5       |
| Troy.....              | 72,013                   | 28                            | 3           |         | 9        |         |                |         |               | 2       |
| Watertown.....         | 31,285                   | 11                            |             |         | 15       |         |                |         |               | 1       |
| White Plains.....      | 21,031                   | 3                             |             |         | 3        |         |                |         |               |         |
| Yonkers.....           | 100,176                  | 22                            | 11          |         | 17       |         | 8              | 1       |               |         |
| North Carolina:        |                          |                               |             |         |          |         |                |         |               |         |
| Durham.....            | 21,719                   | 5                             | 1           |         | 1        |         |                |         |               |         |
| Greensboro.....        | 43,525                   | 9                             |             |         | 31       |         | 1              |         |               | 1       |
| Raleigh.....           | 24,418                   | 13                            |             |         | 5        |         |                |         |               |         |
| Salisbury.....         | 13,884                   | 1                             |             |         |          |         |                |         |               |         |
| Wilmington.....        | 33,372                   | 7                             |             |         |          |         |                |         |               |         |
| Winston-Salem.....     | 48,395                   | 28                            |             |         | 91       | 1       | 2              |         | 6             | 1       |
| North Dakota:          |                          |                               |             |         |          |         |                |         |               |         |
| Fargo.....             | 21,961                   | 0                             | 1           |         |          |         |                |         | 1             |         |
| Grand Forks.....       | 14,010                   |                               |             |         |          |         | 2              |         |               |         |
| Ohio:                  |                          |                               |             |         |          |         |                |         |               |         |
| Akron.....             | 208,435                  | 17                            | 3           |         | 12       |         | 2              |         |               |         |
| Ashtabula.....         | 22,082                   | 4                             |             |         | 13       |         |                |         |               |         |
| Barberton.....         | 18,811                   | 4                             |             |         | 2        |         | 1              |         |               |         |
| Bucyrus.....           | 10,425                   | 2                             |             |         |          |         | 1              |         |               |         |
| Cambridge.....         | 13,104                   | 2                             | 1           |         |          |         | 1              |         | 1             |         |
| Canton.....            | 87,091                   | 10                            | 1           |         | 4        |         |                |         |               | 1       |
| Chillicothe.....       | 15,831                   | 6                             |             |         |          |         |                |         |               |         |
| Cincinnati.....        | 401,247                  | 107                           | 4           |         | 74       | 2       | 8              |         |               | 11      |
| Cleveland.....         | 796,841                  | 168                           | 37          | 1       | 149      |         | 58             |         | 59            | 15      |
| Cleveland Heights..... | 15,236                   |                               |             |         | 3        |         | 2              |         |               |         |
| Columbus.....          | 237,031                  | 59                            |             |         | 5        | 1       | 9              |         | 4             | 5       |
| Dayton.....            | 152,559                  | 31                            | 7           |         | 8        |         | 5              |         | 2             |         |
| East Cleveland.....    | 27,292                   | 3                             |             |         | 5        |         | 4              |         |               |         |
| East Youngstown.....   | 11,237                   | 2                             |             |         |          |         |                |         |               |         |
| Findlay.....           | 17,021                   | 2                             |             |         |          |         |                |         |               |         |
| Fremont.....           | 12,468                   | 5                             |             |         | 3        |         |                |         |               |         |
| Kenmore.....           | 12,683                   |                               |             |         | 15       |         |                |         |               |         |
| Lorain.....            | 37,295                   |                               |             |         | 3        |         | 3              |         |               |         |
| Mansfield.....         | 27,824                   | 7                             |             |         | 6        |         |                |         |               |         |
| Martins Ferry.....     | 11,634                   | 2                             |             |         |          |         |                |         |               |         |
| Middletown.....        | 23,594                   | 6                             |             |         |          |         |                |         |               |         |
| New Philadelphia.....  | 10,718                   |                               |             |         | 11       |         |                |         |               |         |
| Newark.....            | 26,718                   | 10                            |             |         | 15       |         | 1              |         |               |         |
| Niles.....             | 13,080                   | 2                             |             |         |          |         |                |         |               |         |
| Norwood.....           | 24,966                   | 1                             |             |         | 4        |         |                |         |               |         |
| Piqua.....             | 15,044                   | 3                             |             |         |          |         | 2              |         | 1             |         |
| Salem.....             | 10,305                   | 2                             |             |         | 26       |         |                |         |               |         |
| Sandusky.....          | 22,897                   | 5                             |             |         |          |         | 3              |         |               |         |
| Springfield.....       | 60,840                   | 10                            | 1           |         | 4        |         |                |         |               |         |
| Steubenville.....      | 28,508                   | 9                             |             |         | 4        |         |                |         | 1             |         |
| Tiffin.....            | 14,375                   | 2                             |             |         | 7        |         |                |         |               |         |
| Toledo.....            | 243,164                  | 55                            | 6           |         | 19       |         | 27             |         | 12            | 6       |
| Youngstown.....        | 132,358                  | 33                            | 18          | 2       | 40       | 4       | 4              |         |               |         |
| Zanesville.....        | 29,569                   | 8                             | 1           |         |          |         | 1              |         | 1             |         |
| Oklahoma:              |                          |                               |             |         |          |         |                |         |               |         |
| Oklahoma.....          | 91,295                   | 17                            |             |         |          |         |                |         | 5             | 1       |
| Tulsa.....             | 72,075                   |                               | 1           |         | 1        |         | 1              |         |               |         |
| Oregon:                |                          |                               |             |         |          |         |                |         |               |         |
| Portland.....          | 258,288                  | 61                            | 7           | 1       | 3        |         |                |         | 4             | 5       |
| Pennsylvania:          |                          |                               |             |         |          |         |                |         |               |         |
| Allentown.....         | 73,502                   |                               | 4           |         | 9        |         |                |         | 1             |         |
| Altoona.....           | 60,331                   |                               | 1           |         | 1        |         | 1              |         |               |         |
| Beaver Falls.....      | 12,802                   |                               | 1           |         | 3        |         | 1              |         |               |         |
| Berwick.....           | 12,181                   |                               | 2           |         | 2        |         |                |         |               |         |
| Bethlehem.....         | 50,358                   |                               | 1           |         | 18       |         | 1              |         |               |         |
| Braddock.....          | 20,879                   |                               | 1           |         |          |         | 1              |         |               |         |
| Bradford.....          | 15,525                   |                               |             |         | 1        |         |                |         |               |         |
| Butler.....            | 23,778                   |                               | 1           |         | 6        |         |                |         |               |         |

\* Pulmonary only



## CITY REPORTS FOR WEEK ENDED JUNE 23, 1923—Continued.

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

| City.                   | Popula-<br>tion Jan.<br>1, 1920. | Total<br>deaths<br>from<br>all<br>causes. | Diphtheria. |         | Measles. |         | Scarlet<br>fever. |         | Tuber-<br>culosis. |         |  |
|-------------------------|----------------------------------|---|-------------|---------|----------|---------|-------------------|---------|--------------------|---------|--|
|                         |                                  |   | Cases.      | Deaths. | Cases.   | Deaths. | Cases.            | Deaths. | Cases.             | Deaths. |  |
| Pennsylvania—Continued. |                                  |   |             |         |          |         |                   |         |                    |         |  |
| Canonsburg.....         | 10,632                           |   |             |         | 1        |         | 1                 |         |                    |         |  |
| Chambersburg.....       | 13,171                           |   |             |         | 1        |         | 1                 |         |                    |         |  |
| Chester.....            | 58,030                           |   | 1           |         | 2        |         | 1                 |         |                    |         |  |
| Connellsville.....      | 13,804                           |   |             |         | 2        |         |                   |         |                    |         |  |
| Dubois.....             | 13,681                           |   |             |         | 2        |         | 2                 |         |                    |         |  |
| Dunmore.....            | 20,250                           |   |             |         | 8        |         |                   |         |                    |         |  |
| Duquesne.....           | 19,011                           |   | 3           |         |          |         |                   |         |                    |         |  |
| Easton.....             | 33,813                           |   | 1           |         | 11       |         |                   |         |                    |         |  |
| Erie.....               | 93,372                           |   | 1           |         | 113      |         | 1                 |         | 5                  |         |  |
| Farrell.....            | 15,586                           |   |             |         | 2        |         | 1                 |         |                    |         |  |
| Harrisburg.....         | 75,917                           |   |             |         | 2        |         | 1                 |         |                    |         |  |
| Hazleton.....           | 32,277                           |   |             |         | 8        |         |                   |         |                    |         |  |
| Jeannette.....          | 10,627                           |   |             |         | 1        |         | 1                 |         |                    |         |  |
| Johnstown.....          | 67,327                           |   | 1           |         | 9        |         | 4                 |         |                    |         |  |
| Lancaster.....          | 53,150                           |   |             |         | 3        |         | 2                 |         |                    |         |  |
| McKees Rocks.....       | 16,713                           |   |             |         |          |         |                   |         | 1                  |         |  |
| McKeesport.....         | 46,781                           |   | 1           |         | 1        |         |                   |         | 1                  |         |  |
| Meadville.....          | 14,568                           |   |             |         | 7        |         |                   |         |                    |         |  |
| Monessen.....           | 18,179                           |   |             |         |          |         |                   |         | 1                  |         |  |
| Mount Carmel.....       | 17,469                           |   |             |         |          |         |                   |         | 1                  |         |  |
| New Castle.....         | 44,938                           |   | 1           |         |          |         |                   |         |                    |         |  |
| Norristown.....         | 32,319                           |   | 1           |         | 1        |         | 5                 |         |                    |         |  |
| North Braddock.....     | 14,928                           |   | 1           |         | 2        |         | 1                 |         |                    |         |  |
| Philadelphia.....       | 1,823,779                        | 431                                       | 35          | 5       | 39       | 1       | 51                | 2       | 63                 | 44      |  |
| Phoenixville.....       | 10,484                           |   |             |         | 1        |         |                   |         |                    |         |  |
| Pittsburgh.....         | 588,343                          | 174                                       | 15          | 3       | 53       | 2       | 16                | 5       | 14                 | 20      |  |
| Plymouth.....           | 16,500                           |   |             |         |          |         |                   |         |                    |         |  |
| Pottsville.....         | 21,876                           |   |             |         | 1        |         |                   |         |                    |         |  |
| Punxsutawney.....       | 10,311                           |   | 1           |         |          |         |                   |         |                    |         |  |
| Reading.....            | 107,784                          |   | 5           |         | 2        |         |                   |         |                    |         |  |
| Scranton.....           | 137,783                          |   | 5           |         | 11       |         | 1                 |         | 7                  |         |  |
| Shamokin.....           | 21,204                           |   |             |         | 1        |         |                   |         |                    |         |  |
| Sharon.....             | 21,747                           |   |             |         |          |         | 1                 |         |                    |         |  |
| Steelton.....           | 13,428                           |   |             |         |          |         |                   |         | 1                  |         |  |
| Sunbury.....            | 15,721                           |   | 1           |         | 1        |         |                   |         |                    |         |  |
| Tamaqua.....            | 12,363                           |   | 2           |         | 1        |         |                   |         |                    |         |  |
| Uniontown.....          | 15,692                           |   |             |         | 2        |         |                   |         |                    |         |  |
| Warren.....             | 14,272                           |   | 1           |         | 16       |         | 1                 |         | 1                  |         |  |
| Washington.....         | 21,480                           |   |             |         | 17       |         |                   |         |                    |         |  |
| Wilkes-Barre.....       | 73,833                           |   | 4           |         | 10       |         | 1                 |         | 3                  |         |  |
| Wilkinsburg.....        | 24,403                           |   | 2           |         | 3        |         |                   |         |                    |         |  |
| Williamsport.....       | 36,198                           |   | 1           |         | 4        |         | 1                 |         |                    |         |  |
| Woodlawn.....           | 12,495                           |   |             |         |          |         |                   |         | 2                  |         |  |
| York.....               | 47,512                           |   |             |         | 4        |         | 1                 |         | 1                  |         |  |
| Rhode Island:           |                                  |   |             |         |          |         |                   |         |                    |         |  |
| Cranston.....           | 29,407                           | 3   |             |         | 2        |         | 1                 |         |                    |         |  |
| Cumberland (town).....  | 10,077                           | 0   |             |         |          |         |                   |         | 1                  |         |  |
| Newport.....            | 30,255                           | 9   | 4           |         |          | 1       | 2                 |         |                    |         |  |
| Pawtucket.....          | 64,248                           | 15  | 1           |         |          |         |                   |         |                    | 1       |  |
| Providence.....         | 237,595                          | 63  | 10          |         | 18       |         | 8                 |         |                    | 5       |  |
| South Carolina:         |                                  |   |             |         |          |         |                   |         |                    |         |  |
| Charleston.....         | 67,957                           | 23  |             |         | 12       |         |                   |         |                    | 5       |  |
| Columbia.....           | 37,524                           | 17  |             |         | 4        |         |                   |         |                    | 1       |  |
| Greenville.....         | 23,127                           | 1   | 1           |         | 2        |         |                   |         | 10                 |         |  |
| South Dakota:           |                                  |   |             |         |          |         |                   |         |                    |         |  |
| Sioux Falls.....        | 25,202                           | 11  |             |         | 6        |         |                   |         |                    |         |  |
| Tennessee:              |                                  |   |             |         |          |         |                   |         |                    |         |  |
| Chattanooga.....        | 57,895                           | 0   | 1           |         |          |         |                   |         |                    |         |  |
| Knoxville.....          | 77,818                           |   |             |         | 2        |         |                   |         | 3                  | 3       |  |
| Memphis.....            | 162,351                          | 65  | 3           |         | 3        |         |                   |         | 17                 | 9       |  |
| Nashville.....          | 118,342                          | 38  |             |         | 11       |         | 1                 |         | 10                 | 1       |  |
| Texas:                  |                                  |   |             |         |          |         |                   |         |                    |         |  |
| Amarillo.....           | 15,491                           | 5   |             |         |          |         |                   |         |                    |         |  |
| Austin.....             | 34,876                           | 6   |             |         |          |         |                   |         | 1                  | 1       |  |
| Beaumont.....           | 40,422                           | 7   |             |         | 2        |         |                   |         |                    | 1       |  |
| Dallas.....             | 158,976                          | 42  | 4           |         | 19       |         | 4                 |         | 1                  | 2       |  |
| El Paso.....            | 77,560                           | 30  |             |         | 5        |         | 2                 |         | 9                  | 8       |  |
| Fort Worth.....         | 106,482                          | 15  | 1           |         | 1        |         |                   |         | 2                  | 1       |  |
| Galveston.....          | 44,255                           | 19  |             |         |          |         | 1                 |         | 1                  | 1       |  |
| Houston.....            | 138,276                          | 43  |             |         | 2        |         | 1                 |         |                    | 3       |  |
| San Angelo.....         | 10,050                           | 5   |             |         |          |         |                   |         |                    | 2       |  |
| San Antonio.....        | 161,379                          | 74  | 4           |         | 6        |         |                   |         | 7                  | 9       |  |
| Waco.....               | 38,500                           | 3   |             |         |          |         |                   |         |                    |         |  |



## CITY REPORTS FOR WEEK ENDED JUNE 23, 1923—Continued.

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

| City.                | Popula-<br>tion Jan.<br>1, 1920. | Total<br>deaths<br>from<br>all<br>causes. | Diphtheria. |         | Measles. |         | Scarlet<br>fever. |         | Tuber-<br>culosis. |         |
|----------------------|----------------------------------|---|-------------|---------|----------|---------|-------------------|---------|--------------------|---------|
|                      |                                  |   | Cases.      | Deaths. | Cases.   | Deaths. | Cases.            | Deaths. | Cases.             | Deaths. |
| Utah:                |                                  |   |             |         |          |         |                   |         |                    |         |
| Provo.....           | 10,303                           | 4   |             |         |          |         |                   |         |                    |         |
| Salt Lake City.....  | 118,110                          | 24  | 5           |         | 4        |         | 1                 |         |                    | 2       |
| Vermont:             |                                  |   |             |         |          |         |                   |         |                    |         |
| Burlington.....      | 22,779                           | 3   |             |         | 21       |         |                   |         |                    |         |
| Virginia:            |                                  |   |             |         |          |         |                   |         |                    |         |
| Alexandria.....      | 18,060                           | 3   |             |         | 5        |         |                   |         |                    |         |
| Charlottesville..... | 10,688                           |   |             |         | 1        |         |                   |         |                    |         |
| Lynchburg.....       | 30,070                           | 8   | 1           |         | 7        | 1       | 1                 |         | 1                  |         |
| Norfolk.....         | 115,777                          |   | 4           |         | 39       |         |                   |         | 8                  | 3       |
| Petersburg.....      | 31,012                           | 14  |             |         | 30       |         | 1                 |         | 1                  |         |
| Richmond.....        | 171,012                          | 53  |             |         | 134      | 2       | 1                 |         | 2                  | 4       |
| Roanoke.....         | 50,842                           | 16  |             |         | 1        |         |                   |         |                    |         |
| Washington:          |                                  |   |             |         |          |         |                   |         |                    |         |
| Bellingham.....      | 25,585                           |   |             |         |          |         | 3                 |         |                    |         |
| Everett.....         | 27,644                           |   |             |         | 1        |         |                   |         |                    |         |
| Seattle.....         | 315,312                          |   | 5           |         | 34       |         | 3                 |         | 21                 |         |
| Spokane.....         | 104,437                          |   | 3           |         | 4        |         | 2                 |         |                    |         |
| Walla Walla.....     | 15,503                           |   | 4           |         |          |         |                   |         |                    |         |
| Yakima.....          | 18,539                           |   |             |         | 1        |         |                   |         |                    |         |
| West Virginia:       |                                  |   |             |         |          |         |                   |         |                    |         |
| Bluefield.....       | 15,282                           | 2   |             |         | 3        |         |                   |         |                    |         |
| Charleston.....      | 39,608                           | 13  | 1           |         | 8        |         |                   |         | 1                  |         |
| Clarksburg.....      | 27,899                           | 5   |             |         | 33       |         |                   |         |                    | 1       |
| Fairmont.....        | 17,851                           |   | 1           |         | 7        |         |                   |         |                    |         |
| Huntington.....      | 50,177                           | 22  | 1           |         |          | 2       |                   |         | 6                  | 1       |
| Martinsburg.....     | 12,515                           | 1   |             |         | 1        |         |                   |         |                    |         |
| Morgantown.....      | 12,127                           |   |             |         | 1        |         |                   |         |                    |         |
| Parkersburg.....     | 20,050                           | 7   |             |         | 10       |         |                   |         |                    |         |
| Wheeling.....        | 56,208                           | 15  | 1           |         | 1        |         |                   |         | 1                  |         |
| Wisconsin:           |                                  |   |             |         |          |         |                   |         |                    |         |
| Appleton.....        | 19,561                           | 9   | 2           |         | 6        |         | 1                 |         |                    |         |
| Ashland.....         | 11,334                           | 4   | 1           |         | 20       |         |                   |         |                    | 1       |
| Beloit.....          | 21,284                           | 4   |             |         | 14       |         | 7                 |         |                    |         |
| Eau Claire.....      | 20,906                           |   |             |         | 45       |         |                   |         |                    |         |
| Fond du Lac.....     | 23,427                           | 4   |             |         | 1        |         |                   |         |                    |         |
| Green Bay.....       | 31,017                           |   | 4           |         | 15       |         | 4                 |         |                    |         |
| Janesville.....      | 18,293                           | 5   |             |         |          |         | 2                 |         | 1                  |         |
| Kenosha.....         | 40,472                           | 4   | 1           |         |          |         |                   |         |                    |         |
| La Crosse.....       | 30,421                           |   |             |         | 4        |         |                   |         |                    |         |
| Madison.....         | 38,378                           | 13  | 1           |         | 27       |         |                   |         |                    |         |
| Manitowoc.....       | 17,563                           |   |             |         | 24       |         |                   |         |                    |         |
| Marinette.....       | 13,610                           |   |             |         | 7        |         | 3                 |         |                    |         |
| Milwaukee.....       | 457,147                          | 77  | 10          | 1       | 28       |         | 73                |         | 16                 | 9       |
| Oshkosh.....         | 33,162                           | 10  |             |         | 27       |         | 1                 |         |                    | 2       |
| Sheboygan.....       | 30,955                           | 9   | 3           |         | 3        |         | 1                 |         | 1                  |         |
| Superior.....        | 39,671                           | 9   | 1           |         | 1        |         | 1                 |         |                    |         |
| Waukesha.....        | 12,558                           |   |             |         | 9        |         | 2                 |         |                    |         |
| Wausau.....          | 18,661                           |   |             |         | 6        |         | 1                 |         |                    |         |
| West Allis.....      | 13,745                           |   |             |         |          |         | 2                 |         | 1                  |         |
| Wyoming:             |                                  |   |             |         |          |         |                   |         |                    |         |
| Cheyenne.....        | 13,829                           | 4   |             |         |          |         |                   |         |                    |         |

## **FOREIGN AND INSULAR.**

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### **AUSTRALIA.**

#### **Plague—Sydney.**

Under date of July 5, 1923, one case of plague (septicemic), with fatal termination on June 30, 1923, was reported at Sydney, Australia.

### **AZORES.**

#### **Plague—St. Michael Island.**

During the three weeks ended May 26, 1923, 12 cases of plague with 5 deaths were reported in the Island of St. Michael, occurring at one locality.

### **BRAZIL.**

#### **Yellow Fever—Bahia.**

During the three weeks ended June 2, 1923, 16 cases of yellow fever with 5 deaths were reported at Bahia, Brazil.

### **CANARY ISLANDS.**

#### **Plague—Las Palmas.**

A case of plague was reported, June 7, 1923, at Las Palmas, Canary Islands.

### **JAMAICA.**

#### **Smallpox (Reported as Alastrim)—Kingston.**

During the two weeks ended June 9, 1923, 124 cases of smallpox (reported as alastrim) were notified in the Island of Jamaica. Of these, 86 cases were notified during the week ended June 9, 1923. In the parish of Kingston 17 cases were notified.

#### **Typhoid Fever—Kingston and Vicinity.**

During the same period 13 cases of typhoid fever were reported in Kingston and 24 cases in the surrounding country.

## PANAMA CANAL.

## Communicable Diseases—May, 1923.

Communicable diseases were notified for the Panama Canal during the month of May, 1923, as follows:

| Disease.                | Canal Zone. | Colon. | Panama. | Non-resident. | Total. |
|-------------------------|-------------|--------|---------|---------------|--------|
| Chicken pox.....        | 3           | 3      | 9       | .....         | 15     |
| Diphtheria.....         | 1           | 2      | 6       | .....         | 9      |
| Dysentery.....          | 1           | 2      | 2       | .....         | 5      |
| Hookworm infection..... | 6           | 2      | 10      | 10            | 28     |
| Leprosy.....            | .....       | .....  | 1       | 6             | 7      |
| Malaria.....            | 65          | 1      | 3       | 27            | 96     |
| Measles.....            | 4           | 2      | 2       | 2             | 10     |
| Meningitis.....         | .....       | 2      | .....   | .....         | 2      |
| Mumps.....              | .....       | .....  | .....   | 3             | 3      |
| Paratyphoid fever.....  | 1           | .....  | .....   | 1             | 2      |
| Pneumonia.....          | 1           | 2      | 15      | 2             | 20     |
| Relapsing fever.....    | .....       | .....  | .....   | 1             | 1      |
| Scarlet fever.....      | .....       | 1      | .....   | .....         | 1      |
| Tuberculosis.....       | 7           | 16     | 18      | 1             | 42     |
| Typhoid fever.....      | .....       | 2      | 1       | 2             | 5      |

## POLAND.

## Communicable Diseases—March 18–April 7, 1923.

During the three weeks ended April 7, 1923, communicable diseases were notified in Poland as follows:

MARCH 18–24, 1923.

| Disease.                      | Cases. | Deaths. | Districts and city showing greatest mortality. |
|-------------------------------|--------|---------|--|
| Cerebrospinal meningitis..... | 10     | 6       | Kielce.  |
| Diphtheria.....               | 41     | 9       | Silesia; Warsaw.                               |
| Measles.....                  | 546    | 15      | Lwow.  |
| Scarlet fever.....            | 218    | 29      | Stanislawow.                                   |
| Smallpox.....                 | 15     | 4       | Krakow; Stanislawow.                           |
| Tuberculosis.....             | 196    | 234     | Lwow.  |
| Typhoid fever.....            | 208    | 24      | Tarnopol.                                      |
| Typhus fever.....             | 404    | 49      | Stanislawow.                                   |
| Typhus fever, recurrent.....  | 68     | 1       | Nowogrodek.                                    |
| Whooping cough.....           | 65     | 5       | Lwow.  |

MARCH 25–31, 1923.

|                               |     |     |              |
|-------------------------------|-----|-----|--------------|
| Cerebrospinal meningitis..... | 9   | 2   | Lodz; Lwow.  |
| Diphtheria.....               | 53  | 7   | Posen.       |
| Measles.....                  | 335 | 17  | Lodz.        |
| Scarlet fever.....            | 203 | 28  | Stanislawow. |
| Smallpox.....                 | 9   | 2   | Do.          |
| Tuberculosis.....             | 153 | 230 | Lwow.        |
| Typhoid fever.....            | 170 | 22  | Lodz.        |
| Typhus fever.....             | 358 | 17  | Lwow.        |
| Typhus fever, recurrent.....  | 66  | 1   | Nowogrodek.  |
| Whooping cough.....           | 31  | 11  | Stanislawow. |

APRIL 1–7, 1923.

|                               |     |       |                         |
|-------------------------------|-----|-------|-------------------------|
| Cerebrospinal meningitis..... | 15  | 8     | Lwow.                   |
| Diphtheria.....               | 51  | 2     | Lodz; Warsaw.           |
| Measles.....                  | 335 | 10    | Lodz.                   |
| Scarlet fever.....            | 144 | 22    | Do.                     |
| Smallpox.....                 | 6   | ..... | .....                   |
| Tuberculosis.....             | 125 | 203   | Lwow.                   |
| Typhoid fever.....            | 169 | 12    | Former Congress Poland. |
| Typhus fever.....             | 449 | 36    | Lwow.                   |
| Typhus fever, recurrent.....  | 60  | 1     | Polesia.                |
| Whooping cough.....           | 81  | 10    | Lwow.                   |

**Dysentery—Rabies—March 18–April 7, 1923.**

During the period March 18 to April 7, 1923, 38 cases of dysentery with 5 deaths were reported in Poland, occurring in the districts of Krakow, Lwow, and Silesia. During the two weeks ended April 7, 1923, 2 deaths from rabies were reported, occurring in the districts of Lublin and Silesia.

**RUSSIA.****Decrease in Epidemic-Disease Prevalence—January–February, 1923.**

According to information dated April 21, 1923, a decrease in epidemic prevalence of disease was noted in Soviet Russia during the months of January and February, 1923, as compared with the corresponding periods of the preceding year. As regards typhoid fever, typhus fever, and recurrent typhus the reported prevalence was as follows:

| Disease.                     | Number of cases reported. |        |           |         |
|------------------------------|---------------------------|--------|-----------|---------|
|                              | January.                  |        | February. |         |
|                              | 1923                      | 1922   | 1923      | 1922    |
| Typhoid fever.....           | 32,613                    | 73,882 | .....     | .....   |
| Typhus fever.....            | .....                     | .....  | 17,577    | 101,212 |
| Typhus fever, recurrent..... | 30,804                    | 68,080 | 12,646    | 73,423  |

It was stated that complete returns for the month of March, 1923, had not been received, but that data available to date indicated a considerable decrease in prevalence as compared with the same month of 1922.

**Lethargic Encephalitis Made Notifiable.**

Information dated April 15, 1923, shows that lethargic encephalitis (sleeping sickness) has been included among the list of infectious diseases which are subject to obligatory registration in Russia.

**SWEDEN.****Influenza—Goteborg.**

Influenza was continuously reported at Goteborg, Sweden, from the beginning of the year to May 26, 1923, with a total of 766 cases, from 30 to 45 cases being reported weekly. During the week ended February 24, 54 new cases were reported. During the two weeks ended June 2 and 9, 1923, the reported occurrence was 37 and 42 new cases, respectively. The population of Goteborg, according to the census of December 31, 1922, was 228,053.

## UNION OF SOUTH AFRICA.

## Kaffir Pox—Northern Rhodesia.

During the week ended May 21, 1923, 21 cases of smallpox with 8 deaths were reported in Northern Rhodesia. The disease was later reported to be Kaffir pox. Previous occurrence of the disease was reported from March, 1923, with 19 cases and 4 deaths.

## VENEZUELA.

## Epidemic Influenza—Maracaibo.

Under date of June 19, 1923, influenza was reported epidemic at Maracaibo, Venezuela. It was stated that on June 18, 100 new cases were notified.

## VIRGIN ISLANDS.

## Disease Prevalence—May, 1923.

During the month of May, 1923, disease prevalence in the Virgin Islands of the United States was reported as follows:

| Island and disease.      | Cases. | Remarks.                  | Island and disease.            | Cases. | Remarks.            |
|--------------------------|--------|---------------------------|--------------------------------|--------|---------------------|
| St. Thomas and St. John: |        |                           | St. Thomas and St. John—Contd. |        |                     |
| Chaneroid.....           | 2      | One imported.             | Tuberculosis.....              | 1      | Chronic pulmonary.  |
| Chicken pox.....         | 24     |                           | Uncinariasis.....              | 1      | Necator Americanus. |
| Dengue.....              | 3      |                           | St. Croix:                     |        |                     |
| Erysipelas.....          | 1      |                           | Chaneroid.....                 | 1      |                     |
| Gonococcus infection.    | 5      |                           | Chicken pox.....               | 14     |                     |
| Malaria.....             | 1      | Tertian.                  | Dysentery.....                 | 9      | Entamebic.          |
| Measles.....             | 1      |                           | Filariasis.....                | 6      | Bancrofti.          |
| Pellagra.....            | 1      |                           | Leprosy.....                   | 1      |                     |
| Syphilis.....            | 3      |                           | Tuberculosis.....              | 5      | Chronic pulmonary.  |
|                          |        |                           | Uncinariasis.....              | 2      | Necator Americanus. |
|                          |        | Two imported.             |                                |        |                     |
|                          |        | Primary, 1; secondary, 2. |                                |        |                     |

## CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER.

The reports contained in the following tables must not be considered as complete or final as regards either the list of countries included or the figures for the particular countries for which reports are given.

Reports Received During Week Ended July 13, 1923.<sup>1</sup>

## CHOLERA.

| Place.                | Date.           | Cases. | Deaths. | Remarks. |
|-----------------------|-----------------|--------|---------|----------|
| India:                |                 |        |         |          |
| Calcutta.....         | May 6-19.....   | 80     | 80      |          |
| Rangoon.....          | May 13-19.....  | 1      | 1       |          |
| Philippine Islands:   |                 |        |         |          |
| Province—             |                 |        |         |          |
| Mountain Province.... | Mar. 25-31..... | 1      | 1       |          |

<sup>1</sup> From medical officers of the Public Health Service, American consuls, and other sources.

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.**

**Reports Received During Week Ended July 13, 1923—Continued.**

## **PLAGUE.**

| Place.                  | Date.          | Cases. | Deaths. | Remarks.   |
|-------------------------|----------------|--------|---------|--|
| Australia:              |                |        |         |  |
| Sydney.....             | June 30.....   | .....  | 1       |  |
| Azores:                 |                |        |         |  |
| St. Michael Island..... | May 6-26.....  | 12     | 5       | In one locality.   |
| Canary Islands:         |                |        |         |  |
| Las Palmas.....         | June 7.....    | 1      | .....   |  |
| China:                  |                |        |         |  |
| Hongkong.....           | May 6-12.....  | 3      | 3       |  |
| Ecuador:                |                |        |         |  |
| Guayaquil.....          | .....          | .....  | .....   | May 16-31, 1923: Rats examined, 4,800; found infected, 21. |
| India:                  |                |        |         |  |
| Calcutta.....           | May 6-19.....  | 6      | 6       |  |
| Karachi.....            | May 20-26..... | 34     | 23      |  |
| Madras Presidency.....  | May 20-26..... | 71     | 35      |  |
| Rangoon.....            | May 13-19..... | 32     | 30      |  |
| Java:                   |                |        |         |  |
| Residency—              |                |        |         |  |
| Soerakarta.....         | .....          | .....  | .....   | May 16, 1923: Epidemic in five districts.                  |
| Straits Settlements:    |                |        |         |  |
| Singapore.....          | May 6-12.....  | .....  | 2       |  |

## **SMALLPOX.**

|                        |                    |       |       |                                  |
|------------------------|--------------------|-------|-------|----------------------------------|
| Algeria:               |                    |       |       |                                  |
| Algiers.....           | May 1-31.....      | 2     | ..... |                                  |
| Arabia:                |                    |       |       |                                  |
| Aden.....              | May 27-June 2..... | ..... | 1     |                                  |
| Brazil:                |                    |       |       |                                  |
| Pernambuco.....        | May 6-19.....      | 3     | ..... |                                  |
| Rio de Janeiro.....    | May 13-26.....     | 4     | 1     |                                  |
| China:                 |                    |       |       |                                  |
| Chungking.....         | May 13-19.....     | ..... | ..... | Present.                         |
| Foochow.....           | May 13-26.....     | ..... | ..... | Do.                              |
| Hongkong.....          | May 6-12.....      | 10    | 6     |                                  |
| Manchuria—             |                    |       |       |                                  |
| Dairen.....            | May 21-27.....     | 1     | ..... |                                  |
| Harbin.....            | May 7-27.....      | 2     | ..... |                                  |
| Mukden.....            | May 13-20.....     | 1     | ..... |                                  |
| Shanghai.....          | May 21-June 3..... | 4     | ..... | Foreign.                         |
| Ecuador:               |                    |       |       |                                  |
| Guayaquil.....         | May 16-31.....     | 1     | ..... |                                  |
| Finland.....           | .....              | ..... | ..... | May 1-15, 1923: One case.        |
| India:                 |                    |       |       |                                  |
| Calcutta.....          | May 13-19.....     | 3     | 3     |                                  |
| Madras.....            | May 20-26.....     | 12    | ..... |                                  |
| Rangoon.....           | May 13-19.....     | 23    | 11    |                                  |
| Iraq (Mesopotamia):    |                    |       |       |                                  |
| Bagdad.....            | Apr. 1-30.....     | 10    | ..... |                                  |
| Italy:                 |                    |       |       |                                  |
| Turin.....             | May 28-June 3..... | 1     | ..... |                                  |
| Jamaica.....           | .....              | ..... | ..... | May 27-June 9, 1923: Cases, 124. |
| Kingston.....          | May 27-June 9..... | 17    | ..... | (Reported as alastrim.)          |
| Mexico:                |                    |       |       |                                  |
| Chihuahua.....         | June 11-17.....    | 5     | ..... |                                  |
| Persia:                |                    |       |       |                                  |
| Tabriz.....            | Apr. 1-14.....     | ..... | 1     | District.                        |
| Portugal:              |                    |       |       |                                  |
| Oporto.....            | June 10-16.....    | 4     | 2     |                                  |
| Spain:                 |                    |       |       |                                  |
| Barcelona.....         | May 31-June 6..... | ..... | 1     |                                  |
| Valencia.....          | June 3-16.....     | 17    | 1     |                                  |
| Switzerland:           |                    |       |       |                                  |
| Basel.....             | May 27-June 3..... | 1     | ..... |                                  |
| Berne.....             | May 20-26.....     | 1     | ..... |                                  |
| Lucerne.....           | May 1-31.....      | 29    | ..... |                                  |
| Zurich.....            | May 20-June 2..... | 6     | ..... |                                  |
| Union of South Africa: |                    |       |       |                                  |
| Cape Province.....     | May 6-12.....      | ..... | ..... | Outbreaks.                       |
| Northern Rhodesia..... | May 8-14.....      | 21    | 8     |                                  |
| Orange Free State..... | .....do.....       | ..... | ..... | Do.                              |
| Southern Rhodesia..... | May 10-16.....     | ..... | 2     |                                  |



# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.**

**Reports Received During Week Ended July 13, 1923—Continued.**

## **TYPHUS FEVER.**

| Place.                 | Date.              | Cases. | Deaths. | Remarks.  |
|------------------------|--------------------|--------|---------|---|
| Algeria:               |                    |        |         |   |
| Algiers.....           | May 1-31.....      | 41     | 14      |   |
| China:                 |                    |        |         |   |
| Manchuria—             |                    |        |         |   |
| Harbin.....            | May 6-13.....      | 1      |         |   |
| Mukden.....            | May 14-20.....     | 2      |         |   |
| Germany:               |                    |        |         |   |
| Hamburg.....           | May 20-26.....     | 3      |         |   |
| Königsberg.....        | May 13-19.....     | 1      |         |   |
| Stettin.....           | May 27-June 2..... |        | 1       |   |
| Hungary:               |                    |        |         |   |
| Budapest.....          | May 20-26.....     | 3      |         |   |
| Iraq (Mesopotamia):    |                    |        |         |   |
| Bagdad.....            | Apr. 1-30.....     | 2      |         |   |
| Palestine:             |                    |        |         |   |
| Jaffa.....             | May 22-28.....     | 2      |         |   |
| Jerusalem.....         | do.....            | 1      |         |   |
| Persia:                |                    |        |         |   |
| Tabriz.....            | Apr. 1-14.....     | 2      |         |   |
| Poland.....            |                    |        |         | Mar. 18-Apr. 7, 1923: Cases, 1,211; deaths, 102. Recurrent typhus: Cases, 194; deaths, 3. |
| Portugal:              |                    |        |         |   |
| Oporto.....            | June 10-16.....    | 1      |         |   |
| Russia (Soviet).....   |                    |        |         | Feb. 1-28, 1923: Cases, 17,577. Recurrent, Jan. 1-Feb. 28, 1923: Cases, 43,540.           |
| Syria:                 |                    |        |         |   |
| Beirut.....            | May 1-10.....      | 1      |         |   |
| Tunis:                 |                    |        |         |   |
| Tunis.....             | June 4-10.....     | 2      |         |   |
| Union of South Africa: |                    |        |         |   |
| Cape Province.....     | May 6-12.....      |        |         | Outbreaks.  |
| Orange Free State..... | do.....            |        |         | Do.   |
| Transvaal.....         | do.....            |        |         | Do.   |

## **YELLOW FEVER.**

|            |                   |    |   |  |
|------------|-------------------|----|---|--|
| Brazil:    |                   |    |   |  |
| Bahia..... | May 13-June 2.... | 16 | 5 |  |

**Reports Received from June 30 to July 6, 1923.<sup>1</sup>**

## **CHOLERA.**

| Place.     | Date. | Cases. | Deaths. | Remarks.                                       |
|------------|-------|--------|---------|--|
| India..... |       |        |         | Apr. 15-21, 1923: Cases, 3,475; deaths, 2,603. |

## **PLAGUE.**

|               |                    |   |   |   |
|---------------|--------------------|---|---|---|
| Ceylon:       |                    |   |   |   |
| Colombo.....  | May 6-12.....      |   | 3 |   |
| China:        |                    |   |   |   |
| Amoy.....     | May 13-19.....     |   | 1 |   |
| Hongkong..... | Apr. 29-May 5..... | 3 | 1 |   |
| Hawaii:       |                    |   |   |   |
| Hamakua.....  |                    |   |   | Plague-infected rats: Pohakaea, May 23, 1923, 1 rat; vicinity of Pacific Sugar Co. mill, June 2, 1 rat. |

<sup>1</sup> From medical officers of the Public Health Service, American consuls, and other sources. For reports received from Dec. 30, 1922, to June 29, 1923, see Public Health Reports for June 29, 1923. The tables of epidemic diseases are terminated semiannually and new tables begun.

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.**

**Reports Received from June 30 to July 6, 1923—Continued.**

## **PLAGUE—Continued.**

| Place.                 | Date.              | Cases. | Deaths. | Remarks.  |
|------------------------|--------------------|--------|---------|---|
| India:                 |                    |        |         |   |
| Karachi.....           | May 13-19.....     | 26     | 23      |   |
| Madras Presidency..... | May 13-19.....     | 88     | 58      |   |
| Rangoon.....           | May 6-12.....      | 34     | 32      |   |
| Java:                  |                    |        |         |   |
| East Java—             |                    |        |         |   |
| Soerabaya.....         | Apr. 1-30.....     | 487    | 487     |   |
| Madagascar:            |                    |        |         |   |
| Province—              |                    |        |         |   |
| Tananarive.....        | Apr. 1-15.....     | 22     | 19      | Apr. 1-15, 1923: Cases, 22; deaths, 19. Bubonic, 5; pneumonic, 1; septicemic, 16. |
| Mexico:                |                    |        |         |   |
| Tampico.....           |                    |        |         | Apr. 15-21, 1923: 1 plague rat.   |
| Peru:                  |                    |        |         | May 1-15, 1923: Cases, 21; deaths, 11.  |
| Locality—              |                    |        |         |   |
| Callao.....            | May 1-15.....      | 2      | 1       |   |
| Cerro Azul.....        | do.....            | 2      |         |   |
| Chiclayo.....          | do.....            | 5      |         |   |
| Cutervo.....           | do.....            | 2      | 1       |   |
| Huancabamba.....       | do.....            | 3      | 6       |   |
| Lima (city).....       | do.....            | 1      |         |   |
| Lima (country).....    | do.....            | 2      | 1       |   |
| Salaverry.....         | do.....            | 3      | 2       |   |
| Trujillo.....          | do.....            | 1      |         |   |
| Siam:                  |                    |        |         |   |
| Bangkok.....           | Apr. 29-May 12.... | 5      | 4       |   |

## **SMALLPOX.**

|                         |                    |    |    |   |
|-------------------------|--------------------|----|----|---|
| Canada:                 |                    |    |    |   |
| Alberta—                |                    |    |    |   |
| Calgary.....            | May 27-June 2....  | 1  |    | Infection from Deer Lodge, Mont.              |
| Quebec—                 |                    |    |    |   |
| Quebec.....             | June 10-16.....    | 1  |    | Varioloid.                                    |
| Ceylon:                 |                    |    |    |   |
| Colombo.....            | May 6-12.....      | 18 |    | From outside city.                            |
| China:                  |                    |    |    |   |
| Amoy.....               | May 13-19.....     |    | 1  |   |
| Antung.....             | May 14-20.....     | 1  |    |   |
| Hongkong.....           | Apr. 29-May 5....  | 9  | 15 |   |
| Nanking.....            | May 13-26.....     |    |    | Present.                                      |
| Czechoslovakia.....     |                    |    |    | Jan.-Mar., 1923: Cases, 15.                   |
| Great Britain:          |                    |    |    |   |
| Cardiff.....            | June 3-9.....      | 5  |    |   |
| India:                  |                    |    |    |   |
| Karachi.....            | May 13-19.....     | 7  | 6  | Apr. 15-21, 1923: Cases, 1,780; deaths, 491.  |
| Madras.....             | do.....            | 2  |    |   |
| Rangoon.....            | May 6-12.....      | 37 | 16 |   |
| Japan:                  |                    |    |    |   |
| Kobe.....               | May 28-June 3....  | 1  |    |   |
| Java:                   |                    |    |    |   |
| East Java—              |                    |    |    |   |
| Soerabaya.....          | Apr. 22-28.....    | 27 | 4  |   |
| West Java—              |                    |    |    |   |
| Batavia.....            | May 5-11.....      | 6  |    | Province.                                     |
| Mexico:                 |                    |    |    |   |
| Mexico City.....        | May 19-26.....     | 36 |    | Including municipalities in Federal district. |
| Portugal:               |                    |    |    |   |
| Lisbon.....             | May 20-June 2....  | 20 |    |   |
| Portuguese West Africa: |                    |    |    |   |
| Angola—                 |                    |    |    |   |
| Loanda.....             | Apr. 1-21.....     |    | 2  |   |
| Siam:                   |                    |    |    |   |
| Bangkok.....            | Apr. 29-May 12.... | 21 | 8  |   |
| Sierra Leone:           |                    |    |    |   |
| Kaballa.....            | May 1-15.....      | 1  |    |   |
| Spain:                  |                    |    |    |   |
| Valencia.....           | May 15-June 2....  | 8  |    |   |
| Syria:                  |                    |    |    |   |
| Damascus.....           | May 15-21.....     | 2  |    |   |

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.**

**Reports Received from June 30 to July 6, 1923—Continued.**

## **SMALLPOX—Continued.**

| Place.                 | Date.              | Cases. | Deaths. | Remarks.  |
|------------------------|--------------------|--------|---------|---|
| Union of South Africa: |                    |        |         |   |
| Orange Free State..... | Apr. 29-May 5..... | .....  | .....   | Outbreaks.  |
| Southern Rhodesia..... | May 3-9.....       | 4      | .....   |   |
| On vessel:             |                    |        |         |   |
| S. S. Makura.....      | May 26.....        | 2      | .....   | Two cases, in quarantine (reported as alastrim). Vessel left Victoria, B. C., Apr. 28, 1923. Touched at Honolulu. |

## **TYPHUS FEVER.**

|                        |                    |       |       |  |
|------------------------|--------------------|-------|-------|--|
| Chile:                 |                    |       |       |  |
| Talcahuano.....        | May 13-19.....     | 1     | ..... |  |
| China:                 |                    |       |       |  |
| Hankow.....            | May 19-25.....     | 1     | ..... |  |
| Czechoslovakia.....    |                    |       |       | Jan.-Mar., 1923: Cases 191; deaths, 6.                       |
| Egypt:                 |                    |       |       |  |
| Alexandria.....        | May 14-20.....     | 1     | 2     |  |
| Germany:               |                    |       |       |  |
| Coblenz.....           | May 27-June 2..... | ..... | 1     |  |
| Guatemala:             |                    |       |       |  |
| Guatemala City.....    | Apr. 1-May 31..... | ..... | 4     |  |
| Hungary.....           |                    |       |       | Jan. 1-May 10, 1923: Cases, 318; deaths, 39. In 11 counties. |
| Budapest.....          | Jan. 1-May 19..... | 45    | 11    |  |
| Mexico:                |                    |       |       |  |
| Mexico City.....       | May 20-26.....     | 15    | ..... | Including municipalities in Federal district.                |
| Syria:                 |                    |       |       |  |
| Aleppo.....            | .....do.....       | 3     | 1     |  |
| Tunis:                 |                    |       |       |  |
| Tunis.....             | May 23-June 3....  | 1     | ..... |  |
| Union of South Africa: |                    |       |       |  |
| Cape Province.....     | Apr. 29-May 5..... | ..... | ..... | Outbreaks.   |